STIC Search Report
EIC 3700

STIC Database Tracking Number: 136010

TO: Samuel Gilbert
Location: cp2 4d25
Art Unit: 3736
Friday, October 29, 2004

Case Serial Number: 10/675816

From: Emory Damron
Location: EIC 3700
CP2-2C08
Phone: 305-8587

Emory.Damron@uspto.gov

Search Notes

Dear Samuel,

Please find below an inventor search in the bibliographic and full-text foreign patent files, as well as keyword searches in the patent and non-patent literature files, both bibliographic and full text.
References of potential pertinence have been tagged, but please review all the packets in case you like something I didn't.
Of those references which have been tagged, please note any manual highlighting which I've done within the document.
In addition to searching on Dialog, I also searched Google.com, EPO/JPO/Derwent, Scirus/ScienceDirect.
The patent literature yielded most of the relevant art.
Please contact me if I can refocus or expand any aspect of this case, and please take a moment to provide any feedback (on the form provided) so EIC 3700 may better serve your needs. Good Luck!
Sincerely,
Emory Damron
Technical Information Specialist
EIC 3700, US Patent & Trademark Office
Phone: (703) 305-8587/ Fax: (703) 306-5915
Emory.damron@uspto.gov

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Samuel Gilbert Examiner #: 70632 Date: 10/25/04
Art Unit: 3736 Phone Number 30 6-3552 Serial Number: 10/625,816
Mail Box and Bldg/Room Location: CP2 0 15 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc. if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Surgical kit for Treating Incontinence

Inventors (please provide full names): Johann J. Neisz et al.

Earliest Priority Filing Date: 9/30/2003

For Sequence Searches Only *Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

claims 1-14, 36-39 and 42.

a kit for surgical treatment of incontinence using a sling material (AKA tape) and 2 needles of different types wherein the 2 different types of needles are used to implant the sling.

Two handles are provided for the needles (required only in some claims) (the two handles are different)

the first needle has at least 2 straight portions situated at a predetermined angle.

****

STAFF USE ONLY

Searcher: Emory Davis
Searcher Phone #: 305 8587
Searcher Location: CP2 2C8
Date Searcher Picked Up: 10/27/04 (4:45P)
Date Completed: 10/29/04 (11:11)
Searcher Prep & Review Time: 350 min
Clerical Prep Time: 0
Online Time: 35 min

Type of Search

NA Sequence (#) ____
AA Sequence (#) ____
Structure (#) ____
Bibliographic X
Litigation ____
Fulltext X
Patent Family ____
Other ____

Vendors and cost where applicable

STN ____
Dialog X 1644 95
Questel/Orbit ____
Dr.Link ____
Lexis/Nexis ____
Sequence Systems ____
WWW/Internet X
Other (specify) ____

```
Set     Items   Description
S1        910   AU=(NEISZ J? OR NEISZ, J? OR LUND R? OR LUND, R? OR ANDERS-
              ON K? OR ANDERSON, K? OR VANDERSLOOT V? OR VANDERSLOOT, V? OR
              MOORE T? OR MOORE, T? OR BOUCHIER M? OR BOUCHIER, M? OR MORNI-
              NGSTAR R? OR MORNINGSTAR, R? OR ROCHELEAU G? OR ROCHE...
S2          0   JOHAN?(2N)NEISZ OR (ROBERT OR BOB OR ROB)(2N)LUND OR (KIM -
              OR KIMBERLY)(2N)ANDERSON OR VICKI?(2N)VANDERSLOOT OR (TERENCE?
               OR TERR?)(2N)MOORE OR MARK(2N)BOUCHIER OR RAND?(2N)MORNINGST-
              AR OR GARY(2N)ROCHELEAU
S3       9888   INCONTINEN? OR ENURES? OR DYSURES? OR (LACK OR DYSFUNCTION?
               OR TROUBL? OR DISORDER?)(3N)(URIN? OR UROL? OR URETHR? OR MI-
              CTUR? OR MINGEN?)
S4     106711   IC=A61F?
S5         68   S1:S2 AND S3:S4
S6         21   S5 AND S3
S7         21   IDPAT (sorted in duplicate/non-duplicate order)
? show files
File 347:JAPIO Nov 1976-2004/Jun(Updated 041004)
         (c) 2004 JPO & JAPIO
File 350:Derwent WPIX 1963-2004/UD,UM &UP=200467
         (c) 2004  Thomson Derwent
?
```

7/3,K/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

015932736 **Image available**
WPI Acc No: 2004-090577/200409
Related WPI Acc No: 2002-557883; 2002-557884; 2002-583706; 2002-583707; 2002-590895; 2002-740916; 2003-687604; 2004-034746; 2004-216088
XRPX Acc No: N04-072667

Sling assembly for treating incontinence **in female patient, has coupler having two ends with surfaces for conveniently and securely connecting coupler to insertion end of needle by moving coupler and insertion end of needle together**

Patent Assignee: AMS RES CORP (AMSR-N)
Inventor: NACHREINER G J; **NEISZ J J** ; **ROCHELEAU G A**
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20040015057	A1	20040122	US 2001263472	P	20010123	200409 B
			US 2001269829	P	20010220	
			US 2001281350	P	20010404	
			US 2001295068	P	20010601	
			US 2001306915	P	20010720	
			US 2001917443	A	20010727	
			US 2001917562	A	20010727	
			US 2001322330	P	20010912	
			US 20015837	A	20011109	
			US 2001990108	A	20011121	
			US 2003616938	A	20030711	

Priority Applications (No Type Date): US 2003616938 A 20030711; US 2001263472 P 20010123; US 2001269829 P 20010220; US 2001281350 P 20010404 ; US 2001295068 P 20010601; US 2001306915 P 20010720; US 2001917443 A 20010727; US 2001917562 A 20010727; US 2001322330 P 20010912; US 20015837 A 20011109; US 2001990108 A 20011121
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20040015057	A1		26	A61B-005/00	Provisional application US 2001263472
					Provisional application US 2001269829
					Provisional application US 2001281350
					Provisional application US 2001295068
					Provisional application US 2001306915
					CIP of application US 2001917443
					CIP of application US 2001917562
					Provisional application US 2001322330
					CIP of application US 20015837
					Cont of application US 2001990108
					CIP of patent US 6612977
					Cont of patent US 6641525
					CIP of patent US 6652450

Sling assembly for treating incontinence **in female patient, has coupler having two ends with surfaces for conveniently and securely connecting**...
...Inventor: **NEISZ J J** ...

... **ROCHELEAU G A**

Abstract (Basic):
... from a vaginal incision, and a sling (42) for implantation in a

body during an **incontinence** procedure. A coupler (54) has two ends (56,52) with surfaces for conveniently and securely...

... An INDEPENDENT CLAIM is also included for a method of treating **incontinence** in female patient...

...For treating **incontinence** in female patient...

...serious complications associated with sling procedures e.g. urethral obstruction, development of de novo urge **incontinence** , hemorrhage, prolonged urinary retention, infection, and damage to surrounding tissue and sling erosion...

...Title Terms: **INCONTINENCE** ;

7/3,K/2 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX

014737179 **Image available**

WPI Acc No: 2002-557883/200259

Related WPI Acc No: 2002-557884; 2002-583706; 2002-583707; 2002-590895; 2002-740916; 2003-687604; 2004-216088

XRPX Acc No: N02-441550

Incontinence **treatment assembly, for stress urinary** incontinence **surgical procedures, has coupler having ends with surfaces for securely connecting coupler to insertion end of needle by moving coupler and insertion end of needle together**

Patent Assignee: AMERICAN MEDICAL SYSTEMS INC (AMME-N); NACHREINER G J (NACH-I); NEISZ J J (NEIS-I); ROCHELEAU G A (ROCH-I); AMS RES CORP (AMSR-N)

Inventor: NACHREINER G J; **NEISZ J J** ; **ROCHELEAU G A** ; **ANDERSON K A** ; STASKIN D R; WESTRUM J W

Number of Countries: 097 Number of Patents: 010

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200258562	A1	20020801	WO 2001US49578	A	20011228	200259 B
US 20020151762	A1	20021017	US 2001263472	P	20010123	200275
			US 2001269829	P	20010220	
			US 2001281350	P	20010404	
			US 2001295068	P	20010601	
			US 2001306915	P	20010720	
			US 2001917443	A	20010727	
			US 2001917562	A	20010727	
			US 2001990108	A	20011121	
EP 1353597	A1	20031022	EP 2001985603	A	20011228	200370
			WO 2001US49578	A	20011228	
US 6641525	B2	20031104	US 2001269829	P	20010220	200374
			US 2001281350	P	20010404	
			US 2001295068	P	20010601	
			US 2001306915	P	20010720	
			US 2001917443	A	20010727	
			US 2001917562	A	20010727	
			US 20015837	A	20011109	
			US 2001332330	P	20011120	
			US 2001990108	A	20011121	
US 20040015057	A1	20040122	US 2001263472	P	20010123	200409
			US 2001269829	P	20010220	
			US 2001281350	P	20010404	
			US 2001295068	P	20010601	
			US 2001306915	P	20010720	

			US 2001917443	A	20010727		
			US 2001917562	A	20010727		
			US 2001322330	P	20010912		
			US 20015837	A	20011109		
			US 2001990108	A	20011121		
			US 2003616938	A	20030711		
AU 2002235239	A1	20020806	AU 2002235239	A	20011228	200427	
US 20040106845	A1	20040603	US 2001263472	P	20010123	200436	
			US 2001269829	P	20010220		
			US 2001281350	P	20010404		
			US 2001295068	P	20010601		
			US 2001306915	P	20010720		
			US 2001917445	A	20010727		
			US 2003616926	A	20030711		
KR 2004015049	A	20040218	KR 2003709693	A	20030722	200439	
EP 1353597	B1	20040825	EP 2001985603	A	20011228	200456	
			WO 2001US49578	A	20011228		
DE 60105200	E	20040930	DE 105200	A	20011228	200465	
			EP 2001985603	A	20011228		
			WO 2001US49578	A	20011228		

Priority Applications (No Type Date): US 2001990108 A 20011121; US 2001263472 P 20010123; US 2001269829 P 20010220; US 2001281350 P 20010404 ; US 2001295068 P 20010601; US 2001306915 P 20010720; US 2001917443 A 20010727; US 2001917562 A 20010727; US 2001332330 P 20011120; US 20015837 A 20011109; US 2001322330 P 20010912; US 2003616938 A 20030711; US 2001917445 A 20010727; US 2003616926 A 20030711

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200258562	A1	E	49	A61B-017/04	
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW					
US 20020151762	A1			A61F-002/02	Provisional application US 2001263472
					Provisional application US 2001269829
					Provisional application US 2001281350
					Provisional application US 2001295068
					Provisional application US 2001306915
					CIP of application US 2001917443
					CIP of application US 2001917562
EP 1353597	A1	E		A61B-017/04	Based on patent WO 200258562
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
US 6641525	B2			A61F-002/00	Provisional application US 2001269829
					Provisional application US 2001281350
					Provisional application US 2001295068
					Provisional application US 2001306915
					CIP of application US 2001917443
					CIP of application US 2001917562
					CIP of application US 20015837
					Provisional application US 2001332330
US 20040015057	A1		26	A61B-005/00	Provisional application US 2001263472
					Provisional application US 2001269829
					Provisional application US 2001281350
					Provisional application US 2001295068
					Provisional application US 2001306915

CIP of application US 2001917443
CIP of application US 2001917562
Provisional application US 2001322330
CIP of application US 20015837
Cont of application US 2001990108
CIP of patent US 6612977
Cont of patent US 6641525
CIP of patent US 6652450

AU 2002235239 A1 A61B-017/04 Based on patent WO 200258562
US 20040106845 A1 A61F-002/02 Provisional application US 2001263472

Provisional application US 2001269829
Provisional application US 2001281350
Provisional application US 2001295068
Provisional application US 2001306915
Cont of application US 2001917445

KR 2004015049 A A61B-017/06
EP 1353597 B1 E A61B-017/04 Based on patent WO 200258562
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR
DE 60105200 E A61B-017/04 Based on patent EP 1353597
Based on patent WO 200258562

Incontinence **treatment assembly, for stress urinary** incontinence **surgical procedures, has coupler having ends with surfaces for securely connecting coupler to insertion end...**

...Inventor: **NEISZ J J** ...

... **ROCHELEAU G A** ...

... **ANDERSON K A**

Abstract (Basic):

... to then emerge from vaginal incision, and a sling (42) for implantation in body during **incontinence** procedure. Coupler (54) has a first end and a second end with surfaces for conveniently...

... INDEPENDENT CLAIMS are included for (a) a coupler for use in the **incontinence** procedure, and (b) a method of treating **incontinence** in a female patient...

...For urological applications especially for stress urinary **incontinence** surgical procedures. Can also be used for other **urological disorders** such as urge **incontinence** , fecal **incontinence** , mixed **incontinence** , overflow **incontinence** , functional **incontinence** , prolapse (e.g. vaginal or uterine), enteroceles (e.g. of the uterus or small bowel...

Title Terms: **INCONTINENCE** ;

...International Patent Class (Main): **A61F-002/00** ...

... **A61F-002/02**

7/3,K/3 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

014979973 **Image available**
WPI Acc No: 2003-040488/200303
Related WPI Acc No: 2002-740916
XRPX Acc No: N03-031833

Treating fecal incontinence **in a patient, involves placing implantable**

material in the retropubic space to elicit response from foreign bodies
Patent Assignee: ANDERSON K A (ANDE-I); GOHMAN J A (GOHM-I); LUND R E (LUND-I); NEISZ J J (NEIS-I); WATSCHKE B P (WATS-I)
Inventor: **ANDERSON K A** ; GOHMAN J A; **LUND R E** ; **NEISZ J J** ; WATSCHKE B P
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20020161382	A1	20021031	US 2001279794	P	20010329	200303 B
			US 2001302929	P	20010703	
			US 2001307836	P	20010725	
			US 2001322309	P	20010914	
			US 2002106086	A	20020325	

Priority Applications (No Type Date): US 2002106086 A 20020325; US 2001279794 P 20010329; US 2001302929 P 20010703; US 2001307836 P 20010725 ; US 2001322309 P 20010914
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020161382	A1		30	A61B-017/08	Provisional application US 2001279794
					Provisional application US 2001302929
					Provisional application US 2001307836
					Provisional application US 2001322309

Treating fecal incontinence **in a patient, involves placing implantable material in the retropubic space to elicit response from...**
Inventor: **ANDERSON K A** ...

... **LUND R E** ...

... **NEISZ J J**

Abstract (Basic):
... b) a surgical kit for treating **incontinence**
...
...Treating fecal **incontinence** in a patient
...Title Terms: **INCONTINENCE** ;

7/3,K/4 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014920209 **Image available**
WPI Acc No: 2002-740916/200280
Related WPI Acc No: 2002-557883; 2002-557884; 2002-583706; 2002-583707; 2002-590895; 2003-687604; 2004-034746; 2004-068919; 2004-216088
XRAM Acc No: C02-209880
XRPX Acc No: N02-583697
Treatment of incontinence **in patient, comprises placing implantable material in retropubic space and eliciting foreign body response with implantable material**
Patent Assignee: AMS RES CORP (AMSR-N); ANDERSON K A (ANDE-I); GOHMAN J A (GOHM-I); LUND R E (LUND-I); NEISZ J J (NEIS-I); WATSCHKE B P (WATS-I)
Inventor: **ANDERSON K A** ; GOHMAN J A; **LUND R E** ; **NEISZ J J** ; WATSCHKE B P
Number of Countries: 097 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200278571	A2	20021010	WO 2002US9455	A	20020328	200280 B

US 20020161382 A1 20021031 US 2001279794 P 20010329 200303
US 2001302929 P 20010703
US 2001307836 P 20010725
US 2001322309 P 20010914
US 2002106086 A 20020325
EP 1372527 A2 20040102 EP 2002721598 A 20020328 200409
WO 2002US9455 A 20020328
AU 2002252521 A1 20021015 AU 2002252521 A 20020328 200432

Priority Applications (No Type Date): US 2002106086 A 20020325; US 2001279794 P 20010329; US 2001302929 P 20010703; US 2001307836 P 20010725 ; US 2001322309 P 20010914
Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
WO 200278571 A2 E 53 A61F-002/00
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW
US 20020161382 A1 30 A61B-017/08 Provisional application US 2001279794
Provisional application US 2001302929
Provisional application US 2001307836
Provisional application US 2001322309
EP 1372527 A2 E A61F-002/00 Based on patent WO 200278571
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
AU 2002252521 A1 A61F-002/00 Based on patent WO 200278571
Treatment of incontinence **in patient, comprises placing implantable material in retropubic space and eliciting foreign body response with...**
Inventor: **ANDERSON K A ...**

... **LUND R E ...**

... **NEISZ J J**

Abstract (Basic):
... **Incontinence** in patient is treated by placing an implantable material in the retropubic space (11) without
... 2) a kit for a surgical procedure to treat **incontinence** ; and ...

...3) an implant for treating **incontinence** in patients...

...For treating **incontinence** in patients by placing implants (claimed...

...risk of tissue damage, does not produce any complications and are particularly suitable for a **incontinent** patient with scarring in the retropubic space...
...Title Terms: **INCONTINENCE** ;
...International Patent Class (Main): **A61F-002/00**

7/3,K/5 (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX

016199037 **Image available**

WPI Acc No: 2004-356923/200433
XRPX Acc No: N04-285479
Bone anchor and suture attachment assembly used as component of **suprapubic sling procedure, has overtravel relief formed to matching threads to maintain coupling state between the attachment and anchor while allowing relative rotation**
Patent Assignee: COX J E (COXJ-I); JOHNSON R M (JOHN-I); LUND R E (LUND-I); WALDACK L E (WALD-I); WATSCHKE B P (WATS-I)
Inventor: COX J E; JOHNSON R M; **LUND R E** ; WALDACK L E; WATSCHKE B P
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20040093030	A1	20040513	US 2002421747	P	20021028	200433 B
			US 2002335070	A	20021231	

Priority Applications (No Type Date): US 2002421747 P 20021028; US 2002335070 A 20021231
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20040093030	A1		10	A61B-017/04	Provisional application US 2002421747

...Inventor: **LUND R E**

Abstract (Basic):
... Used as component of suprapubic sling procedure used to treat stress urinary **incontinence** .

7/3,K/6 (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX

016058237 **Image available**
WPI Acc No: 2004-216088/200421
Related WPI Acc No: 2002-557883; 2002-557884; 2002-583706; 2002-583707; 2002-590895; 2002-740916; 2003-687604; 2004-034746; 2004-068919
XRAM Acc No: C04-085480
XRPX Acc No: N04-171235
Surgical instrument for implanting implantable material to treat incontinence **, comprises handle portion, and second portion having substantial structure in three dimensions and distal region**
Patent Assignee: AMERICAN MEDICAL SYSTEMS INC (AMME-N); AMS RES CORP (AMSR-N); AMERICAN MEDICAL SYSTEMS INT INC (AMME-N); ANDERSON K A (ANDE-I); MELLIER G (MELL-I); NEISZ J J (NEIS-I); WATSCHKE B P (WATS-I)
Inventor: **ANDERSON K A** ; MELLIER G; **NEISZ J J** ; WATSCHKE B P
Number of Countries: 104 Number of Patents: 016
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1342454	A1	20030910	EP 20035147	A	20030307	200421 B
FR 2838953	A1	20031031	FR 20032854	A	20030307	200421
FR 2839639	A1	20031121	FR 20035766	A	20030514	200421
US 20030171644	A1	20030911	US 2002362806	P	20020307	200421
			US 2002380797	P	20020514	
			US 2002402007	P	20020808	
			US 2002414865	P	20020930	
			US 2002306179	A	20021127	
US 20030176875	A1	20030918	US 2002362806	P	20020307	200421
			US 2002380797	P	20020514	
			US 2002402007	P	20020808	
			US 2002414865	P	20020930	

				US 2002306179	A	20021127	
				US 2003386897	A	20030311	
US 20030212305	A1	20031113		US 2002362806	P	20020307	200421
				US 2002380797	P	20020514	
				US 2002402007	P	20020808	
				US 2002414865	P	20020930	
				US 2002306179	A	20021127	
				US 2003377101	A	20030303	
WO 200375792	A1	20030918		WO 2003US6465	A	20030304	200421
WO 200396930	A1	20031127		WO 2003US7992	A	20030314	200421
FR 2844987	A1	20040402		FR 20032854	A	20030307	200424
				FR 200312975	A	20031105	
FR 2844988	A1	20040402		FR 20032854	A	20030307	200424
				FR 200312976	A	20031105	
FR 2844989	A1	20040402		FR 20032854	A	20030307	200424
				FR 200312978	A	20031105	
FR 2844990	A1	20040402		FR 20032854	A	20030307	200424
				FR 200312979	A	20031105	
FR 2844991	A1	20040402		FR 20032854	A	20030307	200424
				FR 200312980	A	20031105	
AU 2003213688	A1	20030922		AU 2003213688	A	20030304	200431
AU 2003228315	A1	20031202		AU 2003228315	A	20030314	200442
US 20040133217	A1	20040708		US 2002362806	P	20020307	200445
				US 2002380797	P	20020514	
				US 2002402007	P	20020808	
				US 2002414865	P	20020930	
				US 2002306179	A	20021127	
				US 2003386897	A	20030311	
				US 2003739668	A	20031218	

Priority Applications (No Type Date): US 2003377101 A 20030303; US 2002362806 P 20020307; US 2002380797 P 20020514; US 2002402007 P 20020808 ; US 2002414865 P 20020930; US 2002306179 A 20021127; US 2003386897 A 20030311; US 2003739668 A 20031218

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 1342454	A1	E	63	A61F-002/00	
Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR					
FR 2838953	A1			A61B-017/42	
FR 2839639	A1			A61B-017/42	
US 20030171644	A1			A61F-002/00	Provisional application US 2002362806 Provisional application US 2002380797 Provisional application US 2002402007 Provisional application US 2002414865
US 20030176875	A1			A61B-017/10	Provisional application US 2002362806 Provisional application US 2002380797 Provisional application US 2002402007 Provisional application US 2002414865 CIP of application US 2002306179
US 20030212305	A1			A61F-002/00	Provisional application US 2002362806 Provisional application US 2002380797 Provisional application US 2002402007 Provisional application US 2002414865 CIP of application US 2002306179
WO 200375792	A1	E		A61F-002/00	
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN					

IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ
OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU
ZA ZM ZW
Designated States (Regional): EA GH GM KE LS MW MZ OA SD SL SZ TZ UG ZM
ZW
WO 200396930 A1 E A61F-002/00
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN
IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO
NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG UZ VC VN
YU ZA ZM ZW
Designated States (Regional): EA GH GM KE LS MW MZ OA SD SL SZ TZ UG ZM
ZW
FR 2844987 A1 A61B-017/42 Div ex application FR 20032854
FR 2844988 A1 A61B-017/42 Div ex application FR 20032854
FR 2844989 A1 A61B-017/42 Div ex application FR 20032854
FR 2844990 A1 A61B-017/42 Div ex application FR 20032854
FR 2844991 A1 A61B-017/42 Div ex application FR 20032854
AU 2003213688 A1 A61F-002/00 Based on patent WO 200375792
AU 2003228315 A1 A61F-002/00 Based on patent WO 200396930
US 20040133217 A1 A61B-017/04 Provisional application US 2002362806

Provisional application US 2002380797
Provisional application US 2002402007
Provisional application US 2002414865
CIP of application US 2002306179
CIP of application US 2003386897

Surgical instrument for implanting implantable material to treat incontinence **, comprises handle portion, and second portion having substantial structure in three dimensions and distal region**

Inventor: **ANDERSON K A** ...

... **NEISZ J J**

Abstract (Basic):
... An INDEPENDENT CLAIM is also included for a surgical assembly for treating **incontinence** comprising surgical instrument having handle portion, needle portion having substantial structure in three dimensions and...

...For implanting implantable material to treat **incontinence** (claimed...
Technology Focus:
... has securement surface for snap fitting the instrument to another surgical component used to treat **incontinence** . The snap fit provides permanent attachment between the instrument and the other surgical component. The other surgical component comprises dilator of sling assembly for treating **incontinence** .

...Title Terms: **INCONTINENCE** ;
...International Patent Class (Main): **A61F-002/00**

7/3,K/7 (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX

015911079 **Image available**
WPI Acc No: 2004-068919/200407
Related WPI Acc No: 2002-557884; 2002-583707; 2002-590895; 2002-740916; 2003-687604; 2004-034746; 2004-216088

XRAM Acc No: C04-028448
XRPX Acc No: N04-055413

Surgical assembly i.e. sling tool assembly, for treating, e.g. incontinence **in men and women, has segments comprising synthetic material with respective attachment ends, and integrator associating biomaterial to the segments**

Patent Assignee: AMS RES CORP (AMSR-N); ANDERSON K A (ANDE-I); BACHMAN T A (BACH-I); BOUCHIER M S (BOUC-I); GOHMAN J A (GOHM-I); LUND R E (LUND-I); STURZL F D (STUR-I)

Inventor: **ANDERSON K A** ; BACHMAN T A; **BOUCHIER M S** ; GOHMAN J A; **LUND R E** ; STURZL F D

Number of Countries: 096 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030130670	A1	20030710	US 2001263472	P	20010123	200407 B
			US 2001269829	P	20010220	
			US 2001279794	P	20010329	
			US 2001281350	P	20010404	
			US 2001295068	P	20010601	
			US 2001302929	P	20010703	
			US 2001306915	P	20010720	
			US 2001307836	P	20010725	
			US 2001917445	A	20010727	
			US 20015837	A	20011109	
			US 2002106086	A	20020325	
			US 2002405139	P	20020822	
			US 2002280945	A	20021025	
			US 2002306179	A	20021127	
			US 2002335119	A	20021231	
WO 200417862	A2	20040304	WO 2003US24599	A	20030804	200417
AU 2003261400	A1	20040311	AU 2003261400	A	20030804	200457

Priority Applications (No Type Date): US 2002335119 A 20021231; US 2001263472 P 20010123; US 2001269829 P 20010220; US 2001279794 P 20010329 ; US 2001281350 P 20010404; US 2001295068 P 20010601; US 2001302929 P 20010703; US 2001306915 P 20010720; US 2001307836 P 20010725; US 2001917445 A 20010727; US 20015837 A 20011109; US 2002106086 A 20020325; US 2002405139 P 20020822; US 2002280945 A 20021025; US 2002306179 A 20021127

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20030130670	A1		29	A61B-017/08	Provisional application US 2001263472
					Provisional application US 2001269829
					Provisional application US 2001279794
					Provisional application US 2001281350
					Provisional application US 2001295068
					Provisional application US 2001302929
					Provisional application US 2001306915
					Provisional application US 2001307836
					Cont of application US 2001917445
					Cont of application US 20015837
					CIP of application US 2002106086
					Provisional application US 2002405139
					CIP of application US 2002280945
					CIP of application US 2002306179
WO 200417862	A2	E		A61F-002/00	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

AU 2003261400 A1 A61F-002/00 Based on patent WO 200417862

Surgical assembly i.e. sling tool assembly, for treating, e.g. incontinence **in men and women, has segments comprising synthetic material with respective attachment ends, and integrator...**

Inventor: **ANDERSON K A** ...

... **BOUCHIER M S** ...

... **LUND R E**

Abstract (Basic):

... 2) treating **incontinence** by providing a synthetic material for forming a portion of an implant and an implant...

...surgical assembly, i.e. sling tool assembly, is for treating pelvic floor disorders, e.g. **incontinence** or stress urinary **incontinence** in both men and women. It is used inn vault prolapse repair, paravaginal defect repairs...

...Title Terms: **INCONTINENCE** ;

...International Patent Class (Main): **A61F-002/00**

7/3,K/8 (Item 8 from file: 350)

DIALOG(R)File 350:Derwent WPIX

015876913 **Image available**

WPI Acc No: 2004-034746/200403

Related WPI Acc No: 2002-557884; 2002-583706; 2002-583707; 2002-590895; 2002-740916; 2003-687604; 2004-068919; 2004-216088

XRAM Acc No: C04-011455

XRPX Acc No: N04-027651

Surgical implant for addressing female patient's pelvic health disorder, e.g. cystocele repair, includes mesh that affords repair of cystocele, and sling appendages for securement on opposing sides of patient's urethra

Patent Assignee: AMS RES CORP (AMSR-N); ANDERSON K A (ANDE-I); COX J E (COXJ-I); MONTPETIT K P (MONT-I); WATSCHKE B P (WATS-I); WESTRUM J W (WEST-I)

Inventor: **ANDERSON K A** ; COX J E; MONTPETIT K P; STASKIN D R; WATSCHKE B P ; WESTRUM J W

Number of Countries: 096 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200396929	A1	20031127	WO 2003US13113	A	20030428	200403 B
US 20040039453	A1	20040226	US 2001917443	A	20010727	200416
			US 2002380591	P	20020515	
			US 2002280341	A	20021025	
			US 2003456750	P	20030321	
			US 2003423662	A	20030425	
AU 2003234261	A1	20031202	AU 2003234261	A	20030428	200442

Priority Applications (No Type Date): US 2003423662 A 20030425; US 2002380591 P 20020515; US 2003456750 P 20030321; US 2001917443 A 20010727 ; US 2002280341 A 20021025

Patent Details:

Patent No Kind Lan Pg   Main IPC   Filing Notes
WO 200396929 A1 E 70 A61F-002/00
   Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
   CH CN CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS
   JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL
   PT RO RU SD SE SG SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
   Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB
   GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ
   UG ZM ZW
US 20040039453 A1   A61F-002/02   CIP of application US 2001917443
                                      Provisional application US 2002380591
                                      CIP of application US 2002280341
                                      Provisional application US 2003456750
                                      CIP of patent US 6612977
AU 2003234261 A1   A61F-002/00   Based on patent WO 200396929
Inventor: **ANDERSON K A** ...

Abstract (Basic):
...   health disorder, e.g. cystocele repair, vaginal vault prolapse
    repair or enterocele repair (claimed), or **incontinence** , rectocele, or
    prolapse...

...and sizes. It is preassembled or pre-cut in a predetermined shape to
    simultaneously address **incontinence** and cystocele repairs in a
    tension-free manner and to afford efficient use of the...
International Patent Class (Main): **A61F-002/00** ...

... **A61F-002/02**

7/3,K/9   (Item 9 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.

015876738   **Image available**
WPI Acc No: 2004-034571/200403
XRAM Acc No: C04-011287
XRPX Acc No: N04-027549
  Urethral prosthesis comprises stem joined to junction that is adapted to decrease pressure exerted on portion of urethra when tension force is exerted on stem
Patent Assignee: AMS RES CORP (AMSR-N); SIEGEL S W (SIEG-I); ANDERSON K A
  (ANDE-I); ARNAL K R (ARNA-I); LUND R E (LUND-I); WATSCHKE B P (WATS-I)
Inventor: **ANDERSON K A** ; ARNAL K R; **LUND R E** ; SIEGEL S W; WATSCHKE B P
Number of Countries: 103 Number of Patents: 003
Patent Family:
Patent No   Kind   Date   Applicat No   Kind   Date   Week
WO 200394784   A2 20031120 WO 2003US12743 A   20030424 200403 B
US 20030216814 A1 20031120 US 2002378602   P   20020507 200410
                            US 2002429341   P   20021126
                            US 2003422626   A   20030424
AU 2003234212 A1 20031111 AU 2003234212   A   20030424 200442

Priority Applications (No Type Date): US 2002429341 P 20021126; US
  2002378602 P 20020507; US 2003422626 A 20030424
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
WO 200394784 A2 E 34 A61F-002/00
   Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
   CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN

IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW
Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

US 20030216814 A1 A61F-002/04 Provisional application US 2002378602

Provisional application US 2002429341

AU 2003234212 A1 A61F-002/00 Based on patent WO 200394784

Inventor: **ANDERSON K A** ...

... **LUND R E**

Abstract (Basic):

... For treating urinary **incontinence** (claimed) in male...

International Patent Class (Main): **A61F-002/00** ...

... **A61F-002/04**

7/3,K/10 (Item 10 from file: 350)

DIALOG(R)File 350:Derwent WPIX

015625433 **Image available**

WPI Acc No: 2003-687604/200365

Related WPI Acc No: 2002-557883; 2002-557884; 2002-583706; 2002-583707; 2002-590895; 2002-740916; 2004-034746; 2004-068919; 2004-216088

XRAM Acc No: C03-188499

XRPX Acc No: N03-549239

Surgical instrument for addressing and treating pelvic disorders such as incontinence **, comprises handle and elongated rod emerging from handle with major anterior surface, posterior surface and minor side surface**

Patent Assignee: AMS RES CORP (AMSR-N); GASTON J N (GAST-I); INMAN M J (INMA-I); LUND R E (LUND-I); NEISZ J J (NEIS-I); VANDERSLOOT V R (VAND-I) ; VANORNUM D J (VANO-I); WATSCHKE B P (WATS-I); WESTRUM J W (WEST-I)

Inventor: GASTON J N; INMAN M; **LUND R E** ; **NEISZ J J** ; VAN ORNUM D J; **VANDERSLOOT V R** ; WATSCHKE B P; WESTRUM J W; INMAN M J; VANORNUM D J

Number of Countries: 097 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20030065246	A1	20030403	US 2001917445	A	20010727	200365	B
			US 2001343658	P	20011024		
			US 2001336884	P	20011102		
			US 20015837	A	20011109		
			US 2002347494	P	20020111		
			US 2002160922	A	20020516		
			US 2002274524	A	20021017		
WO 200434912	A1	20040429	WO 2003US24362	A	20030804	200429	
AU 2003254314	A1	20040504	AU 2003254314	A	20030804	200467	

Priority Applications (No Type Date): US 2002274524 A 20021017; US 2001917445 A 20010727; US 2001343658 P 20011024; US 2001336884 P 20011102 ; US 20015837 A 20011109; US 2002347494 P 20020111; US 2002160922 A 20020516

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20030065246	A1		16	A61F-002/00	CIP of application US 2001917445
					Provisional application US 2001343658

Provisional application US 2001336884
CIP of application US 20015837
Provisional application US 2002347494
CIP of application US 2002160922

WO 200434912 A1 E A61B-017/00
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZM ZW
Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

AU 2003254314 A1 A61B-017/00 Based on patent WO 200434912

Surgical instrument for addressing and treating pelvic disorders such as incontinence **, comprises handle and elongated rod emerging from handle with major anterior surface, posterior surface and...**

...Inventor: **LUND R E** ...

... **NEISZ J J** ...

... **VANDERSLOOT V R**

Abstract (Basic):
... For addressing and treating pelvic disorders such as cystoceles, rectoceles, vaginal prolapse, anatomic corrections, **incontinence** , stress urinary **incontinence** , **urological** or gynecological **disorders** .

...Title Terms: **INCONTINENCE** ;
...International Patent Class (Main): **A61F-002/00**

7/3,K/11 (Item 11 from file: 350)
DIALOG(R)File 350:Derwent WPIX

015572820 **Image available**
WPI Acc No: 2003-634977/200360
XRAM Acc No: C03-173466
XRPX Acc No: N03-505002

Implantable article for urological applications e.g. sling procedures, comprises elongate biocompatible material, releasable holding units for retaining fold position and unfolding folds upon release to reduce article-tension

Patent Assignee: AMERICAN MEDICAL SYSTEMS (AMME-N); AMS RES CORP (AMSR-N)
Inventor: **ANDERSON K A** ; **NEISZ J J** ; SIEGEL S W
Number of Countries: 001 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20030065402	A1	20030403	US 2001327075	P	20011003	200360	B
			US 20014185	A	20011030		
US 6648921	B2	20031118	US 2001327075	P	20011003	200376	
			US 20014185	A	20011030		

Priority Applications (No Type Date): US 2001327075 P 20011003; US 20014185 A 20011030
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20030065402	A1		22	A61F-002/04	Provisional application US 2001327075

US 6648921 B2 A61B-019/00 Provisional application US 2001327075
Inventor: **ANDERSON K A** ...

... **NEISZ J J**

Abstract (Basic):
... An INDEPENDENT CLAIM is also included for a method of treating **incontinence** by implanting sling...
...International Patent Class (Main): **A61F-002/04**
International Patent Class (Additional): **A61F-002/00**

7/3,K/12 **(Item 12 from file: 350)**
DIALOG(R)File 350:Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.

015478480 **Image available**
WPI Acc No: 2003-540627/200351
XRAM Acc No: C03-146509
XRPX Acc No: N03-428781
Surgical device for placing implantable article about tubular tissue structure has immobilizer, actuator to move implantable article deployment member between retracted and extended positions, holder, and separator
Patent Assignee: ANDERSON K A (ANDE-I); BACHMAN T A (BACH-I); MORNINGSTAR R L (MORN-I); NEISZ J J (NEIS-I); WATSCHKE B P (WATS-I)
Inventor: **ANDERSON K A** ; BACHMAN T A; **MORNINGSTAR R L** ; **NEISZ J J** ; WATSCHKE B P
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030055313	A1	20030320	US 2001316552	P	20010831	200351 B
			US 2001325870	P	20010928	
			US 2002233349	A	20020830	

Priority Applications (No Type Date): US 2002233349 A 20020830; US 2001316552 P 20010831; US 2001325870 P 20010928
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20030055313	A1		30	A61F-002/00	Provisional application US 2001316552
					Provisional application US 2001325870

Inventor: **ANDERSON** K A ...

... **MORNINGSTAR R L** ...

... **NEISZ J J**

Abstract (Basic):
... An INDEPENDENT CLAIM is also included for a method of treating a patient's **incontinence** , which comprises inserting a surgical device with an implantable article into a urethra (U), moving...

...pelvic floor repair and reconstruction procedures. It is particularly useful for treating a female urinary **incontinence** (claimed...

...is capable of implanting the implantable article without piercing the tubular tissue structure. It treats **incontinence** without requiring an incision in the vagina or abdomen of the patient, and without changing ...

International Patent Class (Main): **A61F-002/00**

7/3,K/13 **(Item 13 from file: 350)**
DIALOG(R)File 350:Derwent WPIX

015250296 **Image available**
WPI Acc No: 2003-311222/200330
XRAM Acc No: C03-081509
XRPX Acc No: N03-247690

Surgical device for inserting bone anchor into pubic bone to treat incontinence comprising handle, battery and motor assembly, bone anchor deployment portion and bone anchor mount

Patent Assignee: AMS RES CORP (AMSR-N)
Inventor: **ANDERSON K A ; LUND R E ; NEISZ J J ; ROCHELEAU G A**
Number of Countries: 096 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20020183762	A1	20021205	US 2001295328	P	20010601	200330	B
			US 2001295330	P	20010601		
			US 2001311776	P	20010810		
			US 2001151465	A	20011109		
			US 2002133271	A	20020426		
WO 200298301	A1	20021212	WO 2002US15734	A	20020516	200330	
AU 2002308754	A1	20021216	AU 2002308754	A	20020516	200452	

Priority Applications (No Type Date): US 2002133271 A 20020426; US 2001295328 P 20010601; US 2001295330 P 20010601; US 2001311776 P 20010810 ; US 2001151465 A 20011109
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020183762	A1		25	A61B-017/56	Provisional application US 2001295328
					Provisional application US 2001295330
					Provisional application US 2001311776
					CIP of application US 2001151465
WO 200298301	A1	E		A61B-017/04	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW

AU 2002308754 A1 A61B-017/04 Based on patent WO 200298301

Surgical device for inserting bone anchor into pubic bone to treat incontinence comprising handle, battery and motor assembly, bone anchor deployment portion and bone anchor mount

Inventor: **ANDERSON K A ...**
... **LUND R E ...**

... **NEISZ J J ...**

... **ROCHELEAU G A**

Abstract (Basic):
... An INDEPENDENT CLAIM is also included for a surgical method for treating **incontinence** comprising...

...into the posterior portion of a pubic bone of a patient to treat stress urinary **incontinence** (SUI) diagnosed with urethral hyper mobility or intrinsic sphincter deficiency...
...Title Terms: **INCONTINENCE** ;

7/3,K/14 (Item 14 from file: 350)
DIALOG(R)File 350:Derwent WPIX

015178365 **Image available**
WPI Acc No: 2003-238895/200323
XRPX Acc No: N03-190397
Balloon transporter for use in medical procedure involving e.g. blood vessels, body cavities, has elongate sleeve having axially extending lumen which engages external surface of balloon
Patent Assignee: ANDERSON K A (ANDE-I); DEININGER S T (DEIN-I); DERUS P M (DERU-I); GEORGE S A (GEOR-I); LECHNER-RIEHLE J A (LECH-I)
Inventor: **ANDERSON K A** ; DEININGER S T; DERUS P M; GEORGE S A; LECHNER-RIEHLE J A
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20030004534	A1	20030102	US 2001295307	P	20010601	200323	B
			US 2002162144	A	20020603		

Priority Applications (No Type Date): US 2001295307 P 20010601; US 2002162144 A 20020603
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20030004534	A1		20	A61M-029/00	Provisional application US 2001295307

Inventor: **ANDERSON K A** ...

Abstract (Basic):
... medical procedure involving e.g. blood vessels, body cavities, treatment of vesicle ureteral reflux, fecal **incontinence** , gastrointestinal reflux, urinary **incontinence** .

7/3,K/15 (Item 15 from file: 350)
DIALOG(R)File 350:Derwent WPIX

015114548 **Image available**
WPI Acc No: 2003-175068/200317
XRAM Acc No: C03-045690
XRPX Acc No: N03-137918
Implantable balloon used for treatment of urological condition of stress unitary incontinence **, comprising a valve portion with a piercing and a balloon portion**
Patent Assignee: AMERICAN MEDICAL SYSTEMS INC (AMME-N); MORNINGSTAR R L (MORN-I)
Inventor: **MORNINGSTAR R L**
Number of Countries: 096 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200291954	A2	20021121	WO 2002US18359	A	20020515	200317	B
US 20020173698	A1	20021121	US 2001291493	P	20010515	200317	
			US 2001872704	A	20010601		

AU 2002312438 A1 20021125 AU 2002312438 A 20020515 200452

Priority Applications (No Type Date): US 2001872704 A 20010601; US 2001291493 P 20010515
Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
WO 200291954 A2 E 32 A61F-002/00
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW
US 20020173698 A1 B21D-051/16 Provisional application US 2001291493

AU 2002312438 A1 A61F-002/00 Based on patent WO 200291954
Implantable balloon used for treatment of urological condition of stress unitary incontinence **, comprising a valve portion with a piercing and a balloon portion**
Inventor: **MORNINGSTAR R L**

Abstract (Basic):
... Used for the treatment of urological condition of stress unitary **incontinence** or vesicoureteral reflux resulting from intrinsic sphincter deficiency (ISD...
...Title Terms: **INCONTINENCE** ;
International Patent Class (Main): **A61F-002/00** ...

7/3,K/16 (Item 16 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.

014770191 **Image available**
WPI Acc No: 2002-590895/200263
Related WPI Acc No: 2002-557883; 2002-557884; 2002-583706; 2002-583707; 2002-740916; 2003-687604; 2004-034746; 2004-068919; 2004-216088
XRPX Acc No: N02-468813
Sling delivery system for treating urinary incontinence **in patient, has atraumatic dilator with connection to connect needle during surgical procedure**
Patent Assignee: AMERICAN MEDICAL SYSTEMS INC (AMME-N); ANDERSON K A (ANDE-I); NEISZ J J (NEIS-I); ROCHELEAU G A (ROCH-I); SNITKIN E S (SNIT-I); STASKIN D R (STAS-I); WESTRUM J W (WEST-I)
Inventor: **ANDERSON K A** ; **NEISZ J J** ; **ROCHELEAU G R** ; SNITKIN E S; STASKIN D R; WESTRUM J W; **ROCHELEAU G A**
Number of Countries: 097 Number of Patents: 007
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200262237	A1	20020815	WO 2001US49581	A	20011228	200263 B
US 20030045774	A1	20030306	US 2001263472	P	20010123	200320
			US 2001269829	P	20010220	
			US 2001281350	P	20010404	
			US 2001295068	P	20010601	
			US 2001306915	P	20010720	
			US 2001917443	A	20010727	
			US 2002280341	A	20021025	
US 6612977	B2	20030902	US 2001263472	P	20010123	200359
			US 2001269829	P	20010220	
			US 2001281350	P	20010404	

			US 2001295068	P	20010601	
			US 2001306915	P	20010720	
			US 2001917443	A	20010727	
EP 1353601	A1	20031022	EP 2001988357	A	20011228	200370
			WO 2001US49581	A	20011228	
BR 200116812	A	20040126	BR 200116812	A	20011228	200412
			WO 2001US49581	A	20011228	
AU 2002241673	A1	20020819	AU 2002241673	A	20011228	200427
JP 2004526483	W	20040902	WO 2001US49581	A	20011228	200457
			JP 2002562246	A	20011228	

Priority Applications (No Type Date): US 2001917443 A 20010727; US 2001263472 P 20010123; US 2001269829 P 20010220; US 2001281350 P 20010404 ; US 2001295068 P 20010601; US 2001306915 P 20010720; US 2002280341 A 20021025

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200262237	A1	E	121	A61B-017/06	
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW					
US 20030045774	A1			A61F-002/00	Provisional application US 2001263472
					Provisional application US 2001269829
					Provisional application US 2001281350
					Provisional application US 2001295068
					Provisional application US 2001306915
					Cont of application US 2001917443
US 6612977	B2			A61F-002/02	Provisional application US 2001263472
					Provisional application US 2001269829
					Provisional application US 2001281350
					Provisional application US 2001295068
					Provisional application US 2001306915
EP 1353601	A1	E		A61B-017/06	Based on patent WO 200262237
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
BR 200116812	A			A61B-017/06	Based on patent WO 200262237
AU 2002241673	A1			A61B-017/06	Based on patent WO 200262237
JP 2004526483	W		168	A61B-017/00	Based on patent WO 200262237

Sling delivery system for treating urinary incontinence **in patient, has atraumatic dilat**or with connection to connect needle during surgical **procedure**

Inventor: **ANDERSON K A ...**

... **NEISZ J J ...**

... **ROCHELEAU G R ...**

... **ROCHELEAU G A**

Abstract (Basic):

... a patient; a surgical kit assembly for treating a patient; a method of treating urinary **incontinence** in a patient; a sling system for use in treating a patient; a surgical needle...

...includes a dilator and the needle; a method of implanting a sling to

treat urinary **incontinence** in a female patient; and a method of implanting a sling to treat urinary **incontinence** in a male patient...

...For treating urinary **incontinence** in a patient...
...Title Terms: **INCONTINENCE** ;
...International Patent Class (Main): **A61F-002/00** ...

... **A61F-002/02**

7/3,K/17 (Item 17 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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RELATED TO THIS APPLICATION

014763003 **Image available**
WPI Acc No: 2002-583707/200262
Related WPI Acc No: 2002-557883; 2002-557884; 2002-583706; 2002-590895; 2002-740916; 2003-687604; 2004-034746; 2004-068919; 2004-216088
XRPX Acc No: N02-462851

Kit used during urological applications, particularly incontinence **surgical procedures, comprises implantable material suitable, and two types of needles suitable for a sling procedure**

Patent Assignee: AMERICAN MEDICAL SYSTEMS INC (AMME-N); ANDERSON K A (ANDE-I); NEISZ J J (NEIS-I); ROCHELEAU G A (ROCH-I); SNITKIN E S (SNIT-I); STASKIN D R (STAS-I); WESTRUM J W (WEST-I); BOUCHIER M S (BOUC-I); LUND R E (LUND-I); MOORE T M (MOOR-I); MORNINGSTAR R L (MORN-I) ; VANDERSLOOT V R (VAND-I)

Inventor: **ANDERSON K A ; BOUCHIER M S ; LUND R E ; MOORE T M ; MORNINGSTAR R L ; NEISZ J J ; ROCHELEAU G R ; VANDERSLOOT V R ; ROCHELEAU G A** ; SNITKIN E S; STASKIN D R; WESTRUM J W

Number of Countries: 097 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200258564	A2	20020801	WO 2001US49642	A	20011228	200262	B
US 20020099258	A1	20020725	US 2001263472	P	20010123	200262	
			US 2001269829	P	20010220		
			US 2001281350	P	20010404		
			US 2001295068	P	20010601		
			US 2001306915	P	20010720		
			US 2001917443	A	20010727		
US 20020147382	A1	20021010	US 2001263472	P	20010123	200274	
			US 2001269829	P	20010220		
			US 2001281350	P	20010404		
			US 2001295068	P	20010601		
			US 2001306915	P	20010720		
			US 2001917443	A	20010727		
			US 2001917562	A	20010727		
			US 20015837	A	20011109		
US 20030050530	A1	20030313	US 2001263472	P	20010123	200321	
			US 2001269829	P	20010220		
			US 2001281350	P	20010404		
			US 2001295068	P	20010601		
			US 2001306915	P	20010720		
			US 2001917443	A	20010727		
			US 2001917562	A	20010727		
			US 20015837	A	20011109		
			US 2002280945	A	20021025		
EP 1353599	A2	20031022	EP 2001991458	A	20011228	200370	
			WO 2001US49642	A	20011228		
US 20040068159	A1	20040408	US 2001263472	P	20010123	200426	

				US 2001269829	P	20010220	
				US 2001281350	P	20010404	
				US 2001295068	P	20010601	
				US 2001306915	P	20010720	
				US 2001917443	A	20010727	
				US 2001917562	A	20010727	
				US 20015837	A	20011109	
				US 2002280945	A	20021025	
				US 2003675816	A	20030930	
AU 2002231182	A1	20020806	AU 2002231182	A	20011228	200427	

Priority Applications (No Type Date): US 20015837 A 20011109; US 2001263472 P 20010123; US 2001269829 P 20010220; US 2001281350 P 20010404; US 2001295068 P 20010601; US 2001306915 P 20010720; US 2001917443 A 20010727 ; US 2001917562 A 20010727; US 2002280945 A 20021025; US 2003675816 A 20030930

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200258564	A2	E	89	A61B-017/04	
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW					
US 20020099258	A1			A61F-002/00	Provisional application US 2001263472
					Provisional application US 2001269829
					Provisional application US 2001281350
					Provisional application US 2001295068
					Provisional application US 2001306915
US 20020147382	A1			A61F-002/00	Provisional application US 2001263472
					Provisional application US 2001269829
					Provisional application US 2001281350
					Provisional application US 2001295068
					Provisional application US 2001306915
					CIP of application US 2001917443
					CIP of application US 2001917562
US 20030050530	A1			A61F-002/00	Provisional application US 2001263472
					Provisional application US 2001269829
					Provisional application US 2001281350
					Provisional application US 2001295068
					Provisional application US 2001306915
					CIP of application US 2001917443
					CIP of application US 2001917562
					Cont of application US 20015837
EP 1353599	A2	E		A61B-017/04	Based on patent WO 200258564
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
US 20040068159	A1			A61F-002/00	Provisional application US 2001263472
					Provisional application US 2001269829
					Provisional application US 2001281350
					Provisional application US 2001295068
					Provisional application US 2001306915
					CIP of application US 2001917443
					CIP of application US 2001917562
					Cont of application US 20015837
					Cont of application US 2002280945
					CIP of patent US 6612977

CIP of patent US 6652450
AU 2002231182 A1 A61B-017/04 Based on patent WO 200258564

Kit used during urological applications, particularly incontinence **surgical procedures, comprises implantable material suitable, and two types of needles suitable for a sling...**

Inventor: **ANDERSON K A ...**

... **BOUCHIER M S ...**

... **LUND R E ...**

... **MOORE T M ...**

... **MORNINGSTAR R L ...**

... **NEISZ J J ...**

... **ROCHELEAU G R ...**

... **VANDERSLOOT V R ...**

... **ROCHELEAU G A**

Abstract (Basic):
... For treating **incontinence** , for urological applications particularly **incontinence** surgical procedures...
...Title Terms: **INCONTINENCE** ;
...International Patent Class (Main): **A61F-002/00**
...International Patent Class (Additional): **A61F-002/02** ...

... **A61F-013/00**

7/3,K/18 (Item 18 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.

014763002 **Image available**
WPI Acc No: 2002-583706/200262
Related WPI Acc No: 2002-557883; 2002-557884; 2002-583707; 2002-590895; 2002-740916; 2003-687604; 2004-034746; 2004-216088
XRAM Acc No: C02-165116
XRPX Acc No: N02-462850

Sling for treating urinary incontinence **in patient, comprises two major surfaces, pair of end portions, support portion, and repositioning mechanism**

Patent Assignee: AMERICAN MEDICAL SYSTEMS INC (AMME-N); NEISZ J J (NEIS-I); PORTER C H (PORT-I); WESTRUM J W (WEST-I)
Inventor: **NEISZ J J** ; PORTER C H; WESTRUM J W
Number of Countries: 097 Number of Patents: 006
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200258563	A1	20020801	WO 2001US49632	A	20011228	200262 B
US 20020107430	A1	20020808	US 2001263472	P	20010123	200262
			US 2001269829	P	20010220	
			US 2001281350	P	20010404	
			US 2001295068	P	20010601	
			US 2001306915	P	20010720	
			US 2001917562	A	20010727	

EP 1353598	A1	20031022	EP 2001991456	A	20011228	200370	
			WO 2001US49632	A	20011228		
US 6652450	B2	20031125	US 2001263472	P	20010123	200378	
			US 2001269829	P	20010220		
			US 2001281350	P	20010404		
			US 2001295068	P	20010601		
			US 2001306915	P	20010720		
			US 2001917562	A	20010727		
US 20040015048	A1	20040122	US 2001263472	P	20010123	200407	
			US 2001269829	P	20010220		
			US 2001281350	P	20010404		
			US 2001295068	P	20010601		
			US 2001306915	P	20010720		
			US 2001917562	A	20010727		
			US 2003616925	A	20030711		
AU 2002231181	A1	20020806	AU 2002231181	A	20011228	200427	

Priority Applications (No Type Date): US 2001917562 A 20010727; US 2001263472 P 20010123; US 2001269829 P 20010220; US 2001281350 P 20010404 ; US 2001295068 P 20010601; US 2001306915 P 20010720; US 2003616925 A 20030711

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200258563	A1	E	112	A61B-017/04	
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW				
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW					
US 20020107430	A1			A61F-002/00	Provisional application US 2001263472
					Provisional application US 2001269829
					Provisional application US 2001281350
					Provisional application US 2001295068
					Provisional application US 2001306915
EP 1353598	A1	E		A61B-017/04	Based on patent WO 200258563
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
US 6652450	B2			A61F-002/00	Provisional application US 2001263472
					Provisional application US 2001269829
					Provisional application US 2001281350
					Provisional application US 2001295068
					Provisional application US 2001306915
US 20040015048	A1			A61F-002/02	Provisional application US 2001263472
					Provisional application US 2001269829
					Provisional application US 2001281350
					Provisional application US 2001295068
					Provisional application US 2001306915
					Cont of application US 2001917562
					Cont of patent US 6652450
AU 2002231181	A1			A61B-017/04	Based on patent WO 200258563

Sling for treating urinary incontinence **in patient, comprises two major surfaces, pair of end portions, support portion, and repositioning mechanism**

Inventor: **NEISZ J J ...**

Abstract (Basic):
... An INDEPENDENT CLAIM is included for a method of treating

urinary **incontinence** in a patient, which comprises establishing a pathway in tissue on both sides of a...

...The sling is used for treating urinary **incontinence** in a patient. It is used for treating female **incontinence** with a surgical procedure that includes vaginal incision (claimed...
...Title Terms: **INCONTINENCE** ;
...International Patent Class (Main): **A61F-002/00** ...

... **A61F-002/02**
...International Patent Class (Additional): **A61F-013/00**

7/3,K/19 (Item 19 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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014737180 **Image available**
WPI Acc No: 2002-557884/200259
Related WPI Acc No: 2002-557883; 2002-583706; 2002-583707; 2002-590895; 2002-740916; 2003-687604; 2004-034746; 2004-068919; 2004-216088
XRPX Acc No: N02-441551
Surgical instrument, for treating urological disorder **, comprises an elongate arcuate needle and a handle for implanting a sling assembly**
Patent Assignee: AMERICAN MEDICAL SYSTEMS INC (AMME-N); ANDERSON K A (ANDE-I); NEISZ J J (NEIS-I); ROCHELEAU G A (ROCH-I); STASKIN D R (STAS-I); WESTRUM J W (WEST-I)
Inventor: **ANDERSON K A** ; **NEISZ J J** ; **ROCHELEAU G R** ; STASKIN D R; WESTRUM J W; **ROCHELEAU G A**
Number of Countries: 097 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200258565	A2	20020801	WO 2001US49582	A	20011228	200259 B
US 20020099259	A1	20020725	US 2001263472	P	20010123	200260
			US 2001269829	P	20010220	
			US 2001281350	P	20010404	
			US 2001295068	P	20010601	
			US 2001306915	P	20010720	
			US 2001917445	A	20010727	
EP 1353600	A2	20031022	EP 2001985084	A	20011228	200370
			WO 2001US49582	A	20011228	
AU 2002234068	A1	20020806	AU 2002234068	A	20011228	200427
US 6802807	B2	20041012	US 2001263472	P	20010123	200467
			US 2001269829	P	20010220	
			US 2001281350	P	20010404	
			US 2001295068	P	20010601	
			US 2001306915	P	20010720	
			US 2001917445	A	20010727	

Priority Applications (No Type Date): US 2001917445 A 20010727; US 2001263472 P 20010123; US 2001269829 P 20010220; US 2001281350 P 20010404 ; US 2001295068 P 20010601; US 2001306915 P 20010720
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200258565	A2	E	112	A61B-017/06	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR

IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW
US 20020099259 A1 A61F-002/00 Provisional application US 2001263472

Provisional application US 2001269829
Provisional application US 2001281350
Provisional application US 2001295068
Provisional application US 2001306915

EP 1353600 A2 E A61B-017/06 Based on patent WO 200258565
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
AU 2002234068 A1 A61B-017/06 Based on patent WO 200258565
US 6802807 B2 A61F-002/00 Provisional application US 2001263472
Provisional application US 2001269829
Provisional application US 2001281350
Provisional application US 2001295068
Provisional application US 2001306915

Surgical instrument, for treating urological disorder **, comprises an elongate arcuate needle and a handle for implanting a sling assembly**
Inventor: **ANDERSON K A ...**

... **NEISZ J J ...**
... **ROCHELEAU G R ...**

... **ROCHELEAU G A**

Abstract (Basic):
... For treating urinary **incontinence .**

...International Patent Class (Main): **A61F-002/00**

7/3,K/20 (Item 20 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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011373092
WPI Acc No: 1997-350999/199732
XRAM Acc No: C97-113400
Hydrophilic polyol useful in polyurethane foams e.g. for nappies - comprises e.g. propylene oxide and butylene oxide or their mixtures in specific weight ratio, and polyol with specific hydroxyl content
Patent Assignee: WOODBRIDGE FOAM CORP (WOOD-N)
Inventor: **MOORE T L**
Number of Countries: 074 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9723545	A1	19970703	WO 96CA843	A	19961216	199732	B
AU 9710283	A	19970717	AU 9710283	A	19961216	199745	
US 5763682	A	19980609	US 95576695	A	19951221	199830	

Priority Applications (No Type Date): US 95576695 A 19951221
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9723545	A1	E	21	C08G-065/26	

Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG US UZ VN
Designated States (Regional): AT BE CH DE DK EA ES FI FR GB GR IE IT KE

DISREGARD

LS LU MC MW NL OA PT SD SE SZ UG
AU 9710283 A C08G-065/26 Based on patent WO 9723545
US 5763682 A C07C-041/00

Inventor: **MOORE T L**

...Abstract (Basic): a polyurethane foam, especially a superabsorbent polyurethane foam finding use in e.g. disposable nappies, **incontinence** devices, sponges and absorbent devices for agricultural applications, pest control and chemical spill blockage...

7/3,K/21 (Item 21 from file: 350)
DIALOG(R)File 350:Derwent WPIX

002325228
WPI Acc No: 1980-D1664C/198014
External female urinary drainage device - has flexible cup fitting over urethral opening directing urine into housing which is supported in labial folds
Patent Assignee: ANDERSON K E (ANDE-I)
Inventor: **ANDERSON K E**
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 4194508	A	19800325				198014	B

Priority Applications (No Type Date): US 78891095 A 19780328

Inventor: **ANDERSON K E**

...Abstract (Basic): The externally applied urinary collection and diverting device is for **incontinent** females. It includes a sealed housing with an opening for an ingress conduit. A flexible...
...Title Terms: **INCONTINENCE**
International Patent Class (Additional): **A61F-005/44**

DISREGARD

```
Set     Items   Description
S1        572   AU=(NEISZ J? OR NEISZ, J? OR LUND R? OR LUND, R? OR ANDERS-
                ON K? OR ANDERSON, K? OR VANDERSLOOT V? OR VANDERSLOOT, V? OR
                MOORE T? OR MOORE, T? OR BOUCHIER M? OR BOUCHIER, M? OR MORNI-
                NGSTAR R? OR MORNINGSTAR, R? OR ROCHELEAU G? OR ROCHE...
S2         83   JOHAN?(2N)NEISZ OR (ROBERT OR BOB OR ROB)(2N)LUND OR (KIM -
                OR KIMBERLY)(2N)ANDERSON OR VICKI?(2N)VANDERSLOOT OR (TERENCE?
                 OR TERR?)(2N)MOORE OR MARK(2N)BOUCHIER OR RAND?(2N)MORNINGST-
                AR OR GARY(2N)ROCHELEAU
S3      19001   INCONTINEN? OR ENURES? OR DYSURES? OR (LACK OR DYSFUNCTION?
                 OR TROUBL? OR DISORDER?)(3N)(URIN? OR UROL? OR URETHR? OR MI-
                CTUR? OR MINGEN?)
S4      38168   IC=A61F?
S5         67   S1:S2 AND S3:S4
S6         21   S5 AND S3
S7         21   IDPAT (sorted in duplicate/non-duplicate order)
? show files
File 348:EUROPEAN PATENTS 1978-2004/Oct W03
       (c) 2004 European Patent Office
File 349:PCT FULLTEXT 1979-2002/UB=20041021,UT=20041014
       (c) 2004 WIPO/Univentio
?
```

7/3,AU/1 **(Item 1 from file: 348)**
DIALOG(R)File 348:EUROPEAN PATENTS

01452779
SLING ASSEMBLY WITH SECURE AND CONVENIENT ATTACHMENT
ZU EINEM SICHEREN UND GUNSTIGEN ANBRINGEN GEEIGNETE SCHLINGENEINRICHTUNG
ENSEMBLE FRONDE AVEC FIXATION SURE ET PRATIQUE
PATENT ASSIGNEE:
American Medical Systems, Inc., (486412), 10700 Bren Road West, Minnetonka, MN 55343, (US), (Proprietor designated states: all)
INVENTOR:
ROCHELEAU , Gary , A., 10700 Bren Road West, Minnetonka, MN 55343, (US)
NEISZ , Johann , J., 10700 Bren Road West, Minnetonka, MN 55343, (US)
NACHREINER, Gary, J., 10700 Bren Road West, Minnetonka, MN 55343, (US
LEGAL REPRESENTATIVE:
VOSSIUS & PARTNER (100314), Siebertstrasse 4, 81675 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 1353597 A1 031022 (Basic)
EP 1353597 B1 040825
EP 1353597 B1 040825
WO 2002058562 020801
APPLICATION (CC, No, Date): EP 2001985603 011228; WO 2001US49578 011228
PRIORITY (CC, No, Date): US 263472 P 010123; US 269829 P 010220; US 281350 P 010404; US 295068 P 010601; US 306915 P 010720; US 917443 010727; US 917562 010727; US 332330 P 011120; US 990108 011121
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
RELATED DIVISIONAL NUMBER(S) - PN (AN):
(EP 2004019832)
INTERNATIONAL PATENT CLASS: A61B-017/04; A61B-017/06; A61B-017/42; A61B-017/00
NOTE:
No A-document published by EPO
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	200435	513
CLAIMS B	(German)	200435	460
CLAIMS B	(French)	200435	517
SPEC B	(English)	200435	8120
Total word count - document A			0
Total word count - document B			9610
Total word count - documents A + B			9610

7/3,AU/2 **(Item 2 from file: 349)**
DIALOG(R)File 349:PCT FULLTEXT

00924891
SLING ASSEMBLY WITH SECURE AND CONVENIENT ATTACHMENT
ENSEMBLE FRONDE AVEC FIXATION SURE ET PRATIQUE
Patent Applicant/Assignee:
AMERICAN MEDICAL SYSTEMS INC, 10700 Bren Road West, Minnetonka, MN 55343, US, US (Residence), US (Nationality)
Inventor(s):
ROCHELEAU Gary A , 10700 Bren Road West, Minnetonka, MN 55343, US,
NEISZ Johann J , 10700 Bren Road West, Minnetonka, MN 55343, US,
NACHREINER Gary J, 10700 Bren Road West, Minnetonka, MN 55343, US

Legal Representative:
HOHENSHELL Jeffrey J (agent), 10700 Bren Road West, Minnetonka, MN 55343, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200258562 A1 20020801 (WO 0258562)
Application: WO 2001US49578 20011228 (PCT/WO US0149578)
Priority Application: US 2001263472 20010123; US 2001269829 20010220; US 2001281350 20010404; US 2001295068 20010601; US 2001306915 20010720; US 2001917443 20010727; US 2001917562 20010727; US 2001332330 20011120; US 2001990108 20011121
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 10547

7/3,AU/3 (Item 3 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

01628922
Transobturator surgical articles and methods
Transobturatore chirurgische Gegenstande und Verfahren
Article chirurgical transobturateur et methode
PATENT ASSIGNEE:
American Medical Systems International, Inc, (3984470), 10700 Bren Road West, Minnetonka, Minnesota 55343, (US), (Applicant designated States: all)
INVENTOR:
Anderson , Kimberly A., 956 Coneflower Court, Eagan, Minnesota 55344, (US)
Watschke, Brian P., 13700 Valley View Road # 346, Eden Prairie, Minnesota 55344, (US)
Mellier, Georges, 35, rue de la Poudrette, 69120 Vaulx en Velin, (FR)
Neisz , Johann J., 9951 Egret Blvd NW, Coon Rapids, Minnesota 55433, (US
LEGAL REPRESENTATIVE:
VOSSIUS & PARTNER (100314), Siebertstrasse 4, 81675 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 1342454 A1 030910 (Basic)
APPLICATION (CC, No, Date): EP 2003005147 030307;
PRIORITY (CC, No, Date): US 362806 P 020307; US 380797 P 020514; US 402007 P 020808; US 414865 P 020930; US 306179 021127; US 377101 P 030303
DESIGNATED STATES: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LI; LU; MC; NL; PT; SE; SI; SK; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK
INTERNATIONAL PATENT CLASS: **A61F-002/00**
ABSTRACT WORD COUNT: 14
NOTE:
Figure number on first page: 1
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200337	1410
SPEC A	(English)	200337	17037
Total word count - document A			18447
Total word count - document B			0
Total word count - documents A + B			18447

7/3,AU/4 **(Item 4 from file: 349)**
DIALOG(R)File 349:PCT FULLTEXT
(c) 2004 WIPO/Univentio. All rts. reserv.

01114146
SURGICAL INSTRUMENTS
INSTRUMENTS CHIRURGICAUX
Patent Applicant/Assignee:
AMS RESEARCH CORPORATION, 10700 Bren Road West, Minnetonka, MN 55343, US, US (Residence), US (Nationality)
Inventor(s):
INMAN Mona, 10700 Bren Road West, Minnetonka, MN 55343, US,
WESTRUM John W Jr, 10700 Bren Road West, Minnetonka, MN 55343, US,
GASTON Johannes N, 10700 Bren Road West, Minnetonka, MN 55343, US,
VAN ORNUM Douglas J, 10700 Bren Road West, Minnetonka, MN 55343, US,
LUND Robert E , 10700 Bren Road West, Minnetonka, MN 55343, US,
WATSCHKE Brain P, 10700 Bren Road West, Minnetonka, MN 5534, US,
NEISZ Johannes J , 10700 Bren Road West, Minnetonka, MN 5534, US,
VANDERSLOOT Vicki R , 10700 Bren Road West, Minnetonka, MN 55343, US
Legal Representative:
HOHENSHELL Jeffrey J (agent), 10700 Bren Road West, Minnetonka, MN 55343, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200434912 A1 20040429 (WO 0434912)
Application: WO 2003US24362 20030804 (PCT/WO US03024362)
Priority Application: US 2002274524 20021017
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SK SL TJ
TM TR TT TZ UA UG UZ VN YU ZA ZM ZW
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE
SI SK TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 4937

7/3,AU/5 **(Item 5 from file: 349)**
DIALOG(R)File 349:PCT FULLTEXT
(c) 2004 WIPO/Univentio. All rts. reserv.

01096961
COMPOSITE SLING AND SLING ASSEMBLY TOOL FOR TREATING INCONTINENCE
SYSTEME POUR IMPLANTS PERINEAUX
Patent Applicant/Assignee:
AMS RESEARCH CORPORATION, 10700 Bren Road West, Minnetonka, MN 55343, US,

US (Residence), US (Nationality)
Inventor(s):
ANDERSON Kimberly A , 10700 Bren Road West, Minnetonka, MN 55343, US,
LUND Robert E , 10700 Bren Road West, Minnetonka, MN 55343, US,
BOUCHIER Mark S , 10700 Bren Road West, Minnetonka, MN 55343, US,
STURZL Francis D III, 10700 Bren Road West, Minnetonka, MN 55343, US,
GOHMAN James A, 10700 Bren Road West, Minnetonka, MN 55343, US,
BACHMAN Timothy A, 10700 Bren Road West, Minnetonka, MN 55343, US
Legal Representative:
HOHENSHELL Jeffrey J (agent), 10700 Bren Road West, Minnetonka, MN 55343, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200417862 A2-A3 20040304 (WO 0417862)
Application: WO 2003US24599 20030804 (PCT/WO US03024599)
Priority Application: US 2002405139 20020822; US 2002335119 20021231
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE SI SK TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 12191

7/3,AU/6 (Item 6 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

01068499
IMPROVED PELVIC HEALTH IMPLANTS AND METHODS
IMPLANTS ET PROCEDES DE SOIN PELVIEN AMELIORES
Patent Applicant/Assignee:
AMS RESEARCH CORPORATION, 10700 Bren Road West, Minnetonka, MN 55343, US, US (Residence), US (Nationality)
Inventor(s):
ANDERSON Kimberly A , 10700 Bren Road West, Minnetonka, MN 55343, US,
MONTPETIT Karen Pilney, 10700 Bren Road West, Minnetonka, MN 55343, US,
COX James E, 10700 Bren Road West, Minnetonka, MN 55343, US,
WESTRUM John W Jr, 10700 Bren Road West, Minnetonka, MN 55343, US,
WATSCHKE Brian P, 10700 Bren Road West, Minnetonka, MN 55343, US,
STASKIN David R, 10700 Bren Road West, Minnetonka, MN 55343, US
Legal Representative:
HOHENSHELL Jeffrey J (agent), 10700 Bren Road West, Minnetonka, MN 55343, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200396929 A1 20031127 (WO 0396929)
Application: WO 2003US13113 20030428 (PCT/WO US03013113)
Priority Application: US 2002380591 20020515; US 2003456750 20030321; US 2003423662 20030425
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EC

EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS
LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SK SL TJ TM
TR TT TZ UA UG UZ VN YU ZA ZW
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE
SI SK TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 14054

7/3,AU/7 (Item 7 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

01068448
TRANSOBTURATOR SURGICAL ARTICLES AND METHODS
ARTICLES CHIRURGICAUX ET METHODES DESTINES A ETRE UTILISES DANS UNE INTERVENTION CHIRURGICALE PAR VOIE TRANS-OBTURATRICE
Patent Applicant/Assignee:
AMS RESEARCH CORPORATION, 10700 Bren Road West, Minnetonka, MN 55343, US, US (Residence), US (Nationality)
Inventor(s):
ANDERSON Kimberly A , 956 Coneflower Court, Eagan, MN 55344, US,
WATSCHKE Brian P, 13700 Valley View Road #346, Eden Prairie, MN 55344, US ,
MELLIER Georges, 35, rue de la Poudrette, F-69120 Vaulx en Velin, FR,
NEISZ Johann J , 9951 Egret Blvd NW, Coon Rapids, MN 55433, US
Legal Representative:
LEONARD Robert B (et al) (agent), Faegre & Benson LLP, 2200 Wells Fargo Center, 90 South Seventh Street, Minneapolis, MN 55402, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200396930 A1 20031127 (WO 0396930)
Application: WO 2003US7992 20030314 (PCT/WO US0307992)
Priority Application: US 2002380797 20020514; US 2002402007 20020808; US 2002414865 20020930; US 2002306179 20021127; US 2003377101 20030303
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PH PL PT RO RU SC SD SE
SG SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 17307

7/3,AU/8 (Item 8 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

01066223
URETHRAL PROSTHESIS WITH TENSIONING MEMBER
PROTHESE URETRALE POUR HOMMES, A ELEMENT DE TENSION

Patent Applicant/Assignee:
AMS RESEARCH CORPORATION, 10700 Bren Road West, Minnetonka, MN 55343, US, US (Residence), US (Nationality)
Inventor(s):
ARNAL Kevin R, Chanhassen, MN, US,
LUND Robert E , St. Michael, MN, US,
ANDERSON Kimberly A , Eagan, MN, US
Patent Applicant/Inventor:
SIEGEL Steven W, 17 North Oaks Road, North Oaks, MN55127, US, US (Residence), US (Nationality)
Legal Representative:
CRIMMINS John L (et al) (agent), 2200 Wells Fargo Center, 90 South Seventh Street, Minneapolis, MN 55402-3901, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200394784 A2-A3 20031120 (WO 0394784)
Application: WO 2003US12743 20030424 (PCT/WO US03012743)
Priority Application: US 2002378602 20020507; US 2002429341 20021126
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE SI SK TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 5010

7/3,AU/9 (Item 9 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

01046187
TRANSOBTURATOR SURGICAL ARTICLES AND METHODS
ARTICLES CHIRURGICAUX TRANS-OBTURATEURS ET PROCEDES ASSOCIES
Patent Applicant/Assignee:
AMS RESEARCH CORPORATION, 10700 Bren Road West, Minnetonka, MN 55343, US, US (Residence), US (Nationality)
Inventor(s):
ANDERSON Kimberly A , 956 Coneflower Court, Eagan, MN 55344, US,
WATSCHKE Brian P, 13700 Valley View Road #346, Eden Prairie, MN 55344, US ,
MELLIER Georges, 35, rue de la Poudrette, F-69120 Vaulx en Velin, FR,
NEISZ Johann J , 9951 Egret Boulevard NW, Coon Rapids, MN 55433, US
Legal Representative:
LEONARD Robert B (et al) (agent), 2200 Wells Fargo Center, 90 South Seventh Street, Minneapolis, MN 55402, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200375792 A1 20030918 (WO 0375792)
Application: WO 2003US6465 20030304 (PCT/WO US03006465)
Priority Application: US 2002362806 20020307; US 2002380797 20020514; US 2002402007 20020808; US 2002414865 20020930; US 2002306179 20021127; US 2003377101 20030303
Designated States:
(Protection type is "patent" unless otherwise stated - for applications

prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG
SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 17252

7/3,AU/10 (Item 10 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2004 WIPO/Univentio. All rts. reserv.

01001169
SURGICAL INSTRUMENT AND METHOD
METHODE ET INSTRUMENT CHIRURGICAUX
Patent Applicant/Assignee:
AMS RESEARCH CORPORATION, 10700 Bren Road West, Minnetonka, MN 55343, US,
US (Residence), US (Nationality)
Inventor(s):
HAUSCHILD Sidney F, 10700 Bren Road West, Minnetonka, MI 55343, US,
BOLEA Stephen L, 10700 Bren Road West, Minnetonka, MI 55343, US,
NEISZ Johann J , 10700 Bren Road West, Minnetonka, MI 55343, US
Legal Representative:
HOHENSHELL Jeffrey J (agent), 10700 Bren Road West, Minnetonka, MN 55343,
US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200330756 A2-A3 20030417 (WO 0330756)
Application: WO 2002US32573 20021011 (PCT/WO US0232573)
Priority Application: US 2001329262 20011012
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EC
EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS
LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ
TM TR TT TZ UA UG UZ VN YU ZA ZW
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 7608

7/3,AU/11 (Item 11 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2004 WIPO/Univentio. All rts. reserv.

00976307
SURGICAL KIT FOR TREATING PROSTATE TISSUE
KIT CHIRURGICAL POUR LE TRAITEMENT DE TISSUS PROSTATIQUES
Patent Applicant/Assignee:
AMS RESEARCH CORPORATION, 10700 Bren Road West, Minnetonka, MN 55343, US,
US (Residence), US (Nationality)
Inventor(s):

NEISZ Johann J , c/o Amercian Medical Systems, Inc., 10700 Bren Road West, Minnetonka, MN 55343, US,
ESCANDON M Alejandro Sousa, Poeta Lois Pereiro st. N 1/4 6 -6 izq., 27400 Monforte de Lemos., Lugo, Spain, ES
Legal Representative:
BUSSE Paul W (et al) (agent), Faegre & Benson LLP, 2200 Wells Fargo Center, 90 South 7th Street, Minneapolis, MN, MN 55402-3901, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200305889 A2-A3 20030123 (WO 0305889)
Application: WO 2002US22432 20020709 (PCT/WO US02022432)
Priority Application: US 2001304149 20010710; US 2001329262 20011012
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI
SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 11136

7/3,AU/12 (Item 12 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00964624
BONE ANCHOR INSERTERS AND METHODS
PROCEDES ET DISPOSITIFS D'INTRODUCTION D'ANCRAGE OSSEUX
Patent Applicant/Assignee:
AMS RESEARCH CORPORATION, 10700 Bren Road West, Minnetonka, MN 55343, US, US (Residence), US (Nationality)
Inventor(s):
ANDERSON Kimberly A , 10700 Bren Road West, Minnetonka, MN 55343, US,
NEISZ Johann J , 10700 Bren Road West, Minnetonka, MN 55343, US,
ROCHELEAU Gary A , 10700 Bren Road West, Minnetonka, MN 55343, US,
LUND Robert E , 10700 Bren Road West, Minnetonka, MN 55343, US
Legal Representative:
HOHENSHELL Jeffrey J (agent), 10700 Bren Road West, Minnetonka, MN 55343, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200298301 A1 20021212 (WO 0298301)
Application: WO 2002US15734 20020516 (PCT/WO US0215734)
Priority Application: US 2001295328 20010601; US 2001295330 20010601; US 2001311776 20010810; US 2001151465 20011109; US 2002133271 20020426
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EC
EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS
LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ
TM TR TT TZ UA UG UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English
Filing Language: English
Fulltext Word Count: 13192

7/3,AU/13 (Item 13 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2004 WIPO/Univentio. All rts. reserv.

00958275
IMPLANTABLE MEDICAL BALLOON AND METHOD OF MAKING
BALLONNET MEDICAL IMPLANTABLE ET PROCEDE DE FABRICATION
Patent Applicant/Assignee:
AMERICAN MEDICAL SYSTEMS INC, 10700 Bren Road West, Minnetonka, MN 55343, US, US (Residence), US (Nationality)
Inventor(s):
MORNINGSTAR Randy L , 10700 Bren Road West, Minnetonka, MN 55343, US
Legal Representative:
HOHENSHELL Jeffrey J (agent), 10700 Bren Road West, Minnetonka, MN 55343, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200291954 A2-A3 20021121 (WO 0291954)
Application: WO 2002US18359 20020515 (PCT/WO US0218359)
Priority Application: US 2001291493 20010515; US 2001872704 20010601
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 7487

7/3,AU/14 (Item 14 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2004 WIPO/Univentio. All rts. reserv.

00944884
IMPLANT INSERTED WITHOUT BONE ANCHORS
IMPLANT INSERE SANS ANCRAGES OSSEUX
Patent Applicant/Assignee:
AMS RESEARCH CORPORATION, 10700 Bren Road West, Minnetonka, MN 55343, US, US (Residence), US (Nationality), (For all designated states except: US)
Inventor(s):
NEISZ Johann J , 10700 Bren Road West, Minnetonka, MN 55343, US,
ANDERSON Kimberly A , 10700 Bren Road West, Minnetonka, MN 55343, US,
WATSCHKE Brian P, 10700 Bren Road West, Minnetonka, MN 55343, US,
LUND Robert E , 10700 Bren Road West, Minnetonka, MN 55343, US,
GOHMAN James A, 10700 Bren Road, Minnetonka, MN 55343, US
Legal Representative:
HOHENSHELL Jeffrey J (agent), 10700 Bren Road West, Minnetonka, MN 55343, US,

Patent and Priority Information (Country, Number, Date):
  Patent: WO 200278571 A2-A3 20021010 (WO 0278571)
  Application: WO 2002US9455 20020328 (PCT/WO US0209455)
  Priority Application: US 2001279794 20010329; US 2001302929 20010703; US 2001307836 20010725; US 2001322309 20010914; US 2002106086 20020325
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
  AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EC
  EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS
  LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ
  TM TR TT TZ UA UG UZ VN YU ZA ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
  (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 10474

7/3,AU/15 (Item 15 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00928565
SURGICAL SLING DELIVERY SYSTEM
SYSTEME DE MISE EN PLACE D'UNE FRONDE CHIRURGICALE
Patent Applicant/Assignee:
  AMERICAN MEDICAL SYSTEMS INC, 10700 Bren Road West, Minnetonka, MN 55343, US, US (Residence), US (Nationality)
Inventor(s):
  STASKIN David R, 10700 Bren Road West, Minnetonka, MN 55343, US,
  NEISZ Johann J , 10700 Bren Road West, Minnetonka, MN 55343, US,
  WESTRUM John W Jr, 10700 Bren Road West, Minnetonka, MN 55343, US,
  ROCHELEAU Gary R , 10700 Bren Road West, Minnetonka, MN 55343, US,
  ANDERSON Kimberly A , 10700 Bren Road West, Minnetonka, MN 55343, US,
  SNITKIN Eva S, 10700 Bren Road West, Minnetonka, MN 55343, US
Legal Representative:
  HOHENSHELL Jeffrey J (agent), 10700 Bren Road West, Minnetonka, MN 55343, US,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200262237 A1 20020815 (WO 0262237)
  Application: WO 2001US49581 20011228 (PCT/WO US0149581)
  Priority Application: US 2001263472 20010123; US 2001269829 20010220; US 2001281350 20010404; US 2001295068 20010601; US 2001306915 20010720; US 2001917443 20010727
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
  AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EC
  EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS
  LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ
  TM TR TT TZ UA UG UZ VN YU ZA ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
  (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 24103

7/3,AU/16 **(Item 16 from file: 349)**
DIALOG(R)File 349:PCT FULLTEXT

00924894
SURGICAL INSTRUMENT
INSTRUMENT CHIRURGICAL
Patent Applicant/Assignee:
AMERICAN MEDICAL SYSTEMS INC, 10700 Bren Road West, Minnetonka, MN 55343, US, US (Residence), US (Nationality)
Inventor(s):
ANDERSON Kimberly A , 10700 Bren Road West, Minnetonka, MN 55343, US,
NEISZ Johann J , 10700 Bren Road West, Minnetonka, MN 55343, US,
ROCHELEAU Gary R , 10700 Bren Road West, Minnetonka, MN 55343, US,
WESTRUM John W Jr, 10700 Bren Road West, Minnetonka, MN 55343, US,
STASKIN David R, 10700 Bren Road West, Minnetonka, MN 55343, US
Legal Representative:
HOHENSHELL Jeffrey J (agent), 10700 Bren Road West, Minnetonka, MN 55343, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200258565 A2-A3 20020801 (WO 0258565)
Application: WO 2001US49582 20011228 (PCT/WO US0149582)
Priority Application: US 2001263472 20010123; US 2001269829 20010220; US 2001281350 20010404; US 2001295068 20010601; US 2001306915 20010720; US 2001917445 20010727
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 22615

7/3,AU/17 **(Item 17 from file: 349)**
DIALOG(R)File 349:PCT FULLTEXT

00924893
SURGICAL ARTICLES
ARTICLES CHIRURGICAUX
Patent Applicant/Assignee:
AMERICAN MEDICAL SYSTEMS INC, 10700 Bren Road West, Minnetonka, MN 55343, US, US (Residence), US (Nationality)
Inventor(s):
NEISZ Johann J , 10700 Bren Road West, Minnetonka, MN 55343, US,
LUND Robert E , 10700 Bren Road West, Minnetonka, MN 55343, US,
ANDERSON Kimberly A , 10700 Bren Road West, Minnetonka, MN 55343, US,
VANDERSLOOT Vicki R , 10700 Bren Road West, Minnetonka, MN 55343, US,
MOORE Terence M , 10700 Bren Road West, Minnetonka, MN 55343, US,
BOUCHIER Mark S , 10700 Bren Road West, Minnetonka, MN 55343, US,

MORNINGSTAR Randy L , 10700 Bren Road West, Minnetonka, MN 55343, US,
ROCHELEAU Gary R , 10700 Bren Road West, Minnetonka, MN 55343, US
Legal Representative:
HOHENSHELL Jeffrey J (agent), 10700 Bren Road West, Minnetonka, MN 55343, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200258564 A2-A3 20020801 (WO 0258564)
Application: WO 2001US49642 20011228 (PCT/WO US0149642)
Priority Application: US 2001263472 20010123; US 2001269829 20010220; US 2001281350 20010404; US 2001295068 20010601; US 2001306915 20010720; US 2001917443 20010727; US 2001917562 20010727; US 20015837 20011109
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 21066

= (US) 2002/0099258

7/3,AU/18 (Item 18 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00924892
IMPLANTABLE SLING
BRETELLE IMPLANTABLE
Patent Applicant/Assignee:
AMERICAN MEDICAL SYSTEMS INC, 10700 Bren Road West, Minnetonka, MN 55343, US, US (Residence), US (Nationality)
Inventor(s):
NEISZ Johann J , 10700 Bren Road West, Minnetonka, MN 55343, US,
WESTRUM John W Jr, 10700 Bren Road West, Minnetonka, MN 55343, US,
PORTER Christopher H, 10700 Bren Road West, Minnetonka, MN 55343, US
Legal Representative:
HOHENSHELL Jeffrey J (agent), 10700 Bren Road West, Minnetonka, MN 55343, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200258563 A1 20020801 (WO 0258563)
Application: WO 2001US49632 20011228 (PCT/WO US0149632)
Priority Application: US 2001263472 20010123; US 2001269829 20010220; US 2001281350 20010404; US 2001295068 20010601; US 2001306915 20010720; US 2001917562 20010727
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English
Filing Language: English
Fulltext Word Count: 22929

7/3,AU/19 (Item 19 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00894635
SLING ADJUSTMENT AND TENSIONING ACCESSORY
ACCESSOIRE DE TENSION ET DE REGLAGE DES FRONDES
Patent Applicant/Assignee:
AMERICAN MEDICAL SYSTEMS INC, 10700 Bren Road West, Minnetonka, MN 55343, US, US (Residence), US (Nationality)
Inventor(s):
LUND Robert E , 10700 Bren Road West, Minnetonka, MN 55343, US,
NEISZ Johann J , 10700 Bren Road West, Minnetonka, MN 55343, US,
WATSCHKE Brian P, 10700 Bren Road West, Minnetonka, MN 55343, US,
WESTRUM Jr John W, 10700 Bren Road West, Minnetonka, MN 55343, US
Legal Representative:
HOHENSHELL Jeffrey J (agent), 10700 Bren Road West, Minnetonka, MN 55343, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200228315 A2-A3 20020411 (WO 0228315)
Application: WO 2001US31360 20011005 (PCT/WO US0131360)
Priority Application: US 2000238771 20001006; US 2001968239 20011001
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 8597

7/3,AU/20 (Item 20 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

DISREGARD

00802433
22 HUMAN SECRETED PROTEINS
22 PROTEINES HUMAINES SECRETEES
Patent Applicant/Assignee:
HUMAN GENOME SCIENCES INC, 9410 Key West Avenue, Rockville, MD 20850, US, US (Residence), US (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
SOPPET Daniel R, 15050 Stillfield Place, Centreville, VA 22020, US, US (Residence), US (Nationality), (Designated only for: US)
KOMATSOULIS George, 9518 Garwood Street, Silver Spring, MD 20901, US, US (Residence), US (Nationality), (Designated only for: US)
SHI Yanggu, 437 West Side Drive, Apt. 102, Gaithersburg, MD 20878, US, US (Residence), CN (Nationality), (Designated only for: US)

OLSEN Henrik S, 182 Kendrick Place #24, Gaithersburg, MD 20878, US, US (Residence), DK (Nationality), (Designated only for: US)
RUBEN Steven M, 18528 Heritage Hills Drive, Olney, MD 20832, US, US (Residence), US (Nationality), (Designated only for: US)
Legal Representative:
HOOVER Kenley K (et al) (agent), Human Genome Sciences, Inc., 9410 Key West Avenue, Rockville, MD 20850, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200134767 A2-A3 20010517 (WO 0134767)
Application: WO 2000US30036 20001101 (PCT/WO US0030036)
Priority Application: US 99163576 19991105; US 2000221366 20000727
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 136073

7/3,AU/21 (Item 21 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00382802
HYDROPHILIC POLYOL AND PROCESS FOR PRODUCTION THEREOF
POLYOL HYDROPHILE ET PROCEDE POUR LE PREPARER
Patent Applicant/Assignee:
WOODBRIDGE FOAM CORPORATION,
MOORE Terry L,
Inventor(s):
MOORE Terry L
Patent and Priority Information (Country, Number, Date):
Patent: WO 9723545 A1 19970703
Application: WO 96CA843 19961216 (PCT/WO CA9600843)
Priority Application: US 95576695 19951221
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG US UZ VN KE LS MW SD SZ UG AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG
Publication Language: English
Fulltext Word Count: 5434

DISREGARD

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Set     Items   Description
S1      31586   AU=(NEISZ J? OR NEISZ, J? OR LUND R? OR LUND, R? OR ANDERS-
             ON K? OR ANDERSON, K? OR VANDERSLOOT V? OR VANDERSLOOT, V? OR
             MOORE T? OR MOORE, T? OR BOUCHIER M? OR BOUCHIER, M? OR MORNI-
             NGSTAR R? OR MORNINGSTAR, R? OR ROCHELEAU G? OR ROCHE...
S2        615   JOHAN?(2N)NEISZ OR (ROBERT OR BOB OR ROB)(2N)LUND OR (KIM -
             OR KIMBERLY)(2N)ANDERSON OR VICKI?(2N)VANDERSLOOT OR (TERENCE?
              OR TERR?)(2N)MOORE OR MARK(2N)BOUCHIER OR RAND?(2N)MORNINGST-
             AR OR GARY(2N)ROCHELEAU
S3     149498   INCONTINEN? OR ENURES? OR DYSURES? OR (LACK OR DYSFUNCTION?
              OR TROUBL? OR DISORDER?)(3N)(URIN? OR UROL? OR URETHR? OR MI-
             CTUR? OR MINGEN?)
S4         33   S1:S2 AND S3
S5         27   RD (unique items)
? show files
File   2:INSPEC 1969-2004/Oct W3
         (c) 2004 Institution of Electrical Engineers
File   5:Biosis Previews(R) 1969-2004/Oct W4
         (c) 2004 BIOSIS
File   6:NTIS 1964-2004/Oct W2
         (c) 2004 NTIS, Intl Cpyrght All Rights Res
File   8:Ei Compendex(R) 1970-2004/Oct W3
         (c) 2004 Elsevier Eng.  Info. Inc.
File  34:SciSearch(R) Cited Ref Sci 1990-2004/Oct W4
         (c) 2004 Inst for Sci Info
File  35:Dissertation Abs Online 1861-2004/Sep
         (c) 2004 ProQuest Info&Learning
File  65:Inside Conferences 1993-2004/Oct W4
         (c) 2004 BLDSC all rts. reserv.
File  71:ELSEVIER BIOBASE 1994-2004/Oct W3
         (c) 2004  Elsevier Science B.V.
File  73:EMBASE 1974-2004/Oct W4
         (c) 2004 Elsevier Science B.V.
File  94:JICST-EPlus 1985-2004/Sep W4
         (c)2004 Japan Science and Tech Corp(JST)
File  95:TEME-Technology & Management 1989-2004/Jun W1
         (c) 2004 FIZ TECHNIK
File  99:Wilson Appl. Sci & Tech Abs 1983-2004/Sep
         (c) 2004 The HW Wilson Co.
File 144:Pascal 1973-2004/Oct W3
         (c) 2004 INIST/CNRS
File 155:MEDLINE(R) 1951-2004/Oct W4
         (c) format only 2004 The Dialog Corp.
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
         (c) 1998 Inst for Sci Info
File 481:DELPHES Eur Bus 95-2004/Oct W3
         (c) 2004 ACFCI & Chambre CommInd Paris
File 583:Gale Group Globalbase(TM) 1986-2002/Dec 13
         (c) 2002 The Gale Group
?
```

5/3,K/1 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0014641929 BIOSIS NO.: 200400022686
Implantable article and method for treating urinary incontinence **using means for repositioning the implantable article**
AUTHOR: **Neisz Johann J** (Reprint); Westrum John W; Porter Christopher H
JOURNAL: Official Gazette of the United States Patent and Trademark Office Patents 1276 (4): Nov. 25, 2003 2003
MEDIUM: e-file
PATENT NUMBER: US 6652450 PATENT DATE GRANTED: November 25, 2003 20031125
PATENT CLASSIFICATION: 600-30 PATENT ASSIGNEE: American Medical Systems, Inc. PATENT COUNTRY: USA
ISSN: 0098-1133 (ISSN print)
DOCUMENT TYPE: Patent
RECORD TYPE: Abstract
LANGUAGE: English

Implantable article and method for treating urinary incontinence **using means for repositioning the implantable article**
AUTHOR: **Neisz Johann J** ...

ABSTRACT: An implantable article and method of use are disclosed to treat **urological disorders** . The biocompatible device includes a sling assembly configured to be minimally invasive and provide sufficient...
DESCRIPTORS:
DISEASES: urinary **incontinence** --
MESH TERMS: Urinary **Incontinence** (MeSH)
...METHODS & EQUIPMENT: urinary **incontinence** treating method...

5/3,K/2 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0013607070 BIOSIS NO.: 200200200581
Biomechanical and sensory properties of the rectum in fecal incontinence
AUTHOR: **Anderson Kiersten** (Reprint); Gregersen Hans (Reprint); Rao Satish Sc (Reprint
AUTHOR ADDRESS: Univ of Iowa, Iowa City, IA, USA**USA
JOURNAL: Gastroenterology 120 (5 Supplement 1): pA.397 April, 2001 2001
MEDIUM: print
CONFERENCE/MEETING: 102nd Annual Meeting of the American Gastroenterological Association and Digestive Disease Week Atlanta, Georgia, USA May 20-23, 2001; 20010520
SPONSOR: American Gastroenterological Association
American Association for the Study of Liver Diseases
American Society for Gastrointestinal Endoscopy
Society for Surgery of the Alimentary Tract
ISSN: 0016-5085
DOCUMENT TYPE: Meeting; Meeting Abstract
RECORD TYPE: Citation
LANGUAGE: English

DISREGARD

Biomechanical and sensory properties of the rectum in fecal incontinence
AUTHOR: **Anderson Kiersten** ...
DESCRIPTORS:
DISEASES: fecal **incontinence** --
MESH TERMS: Fecal **Incontinence** (MeSH)

5/3,K/3 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0000334956 BIOSIS NO.: 197006021502
THE MANAGEMENT OF INCONTINENCE **OF** URINE **IN NEUROLOGICAL** DISORDERS
AUTHOR: **MOORE T**
JOURNAL: Bibliotheca Psychiatrica et Neurologica p164-173 1969
DOCUMENT TYPE: Article
RECORD TYPE: Citation
LANGUAGE: Unspecified

PROBABLY NOT "TERRACE"

THE MANAGEMENT OF INCONTINENCE **OF** URINE **IN NEUROLOGICAL** DISORDERS
AUTHOR: **MOORE T**

5/3,K/4 (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

02735079 Genuine Article#: MA519 No. References: 865
Title: PHARMACOLOGY OF LOWER URINARY-TRACT SMOOTH MUSCLES AND PENILE ERECTILE TISSUES
Author(s): **ANDERSON KE**
Corporate Source: UNIV LUND HOSP,DEPT CLIN PHARMACOL/S-22185 LUND//SWEDEN/
Journal: PHARMACOLOGICAL REVIEWS, 1993, V45, N3 (SEP), P253-308
ISSN: 0031-6997
Language: ENGLISH Document Type: REVIEW

Author(s): **ANDERSON KE**
...Research Fronts: INTRACAVERNOUS INJECTION OF PROSTAGLANDIN-E1; VASOACTIVE DRUGS; CAVERNOUS ELECTRICAL-ACTIVITY)
91-4897 001 (STRESS URINARY- **INCONTINENCE** ; ELDERLY PEOPLE; PELVIC FLOOR EXERCISES; DETRUSOR INSTABILITY)
91-8029 001 (GALANIN RECEPTORS; REGIONAL DISTRIBUTION; RAT...

DISREGARD

5/3,K/5 (Item 1 from file: 35)
DIALOG(R)File 35:Dissertation Abs Online

01380547 ORDER NO: AADMM-87182
DEVELOPMENT AND TESTING OF AN INSTRUMENT TO ASSESS THE INFORMATION NEEDS OF PERSONS WITH URINARY INCONTINENCE **LIVING IN THE COMMUNITY**
Author: **MOORE, THERESA FRANCES**
Degree: M.SC.
Year: 1993
Corporate Source/Institution: UNIVERSITY OF TORONTO (CANADA) (0779)
Source: VOLUME 32/06 of MASTERS ABSTRACTS.
PAGE 1630. 217 PAGES
ISBN: 0-315-87182-2

DEVELOPMENT AND TESTING OF AN INSTRUMENT TO ASSESS THE INFORMATION NEEDS OF PERSONS WITH URINARY INCONTINENCE **LIVING IN THE COMMUNITY**
Author: **MOORE, THERESA FRANCES**

This study developed and tested an instrument to assess the information needs of **incontinent** persons belonging to the Canadian Simon

Foundation for Continence. The Foundation, which has a mandate to provide information about **incontinence** , had identified a need to assess the type of information desired by its members but...

5/3,K/6 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE

12713923 EMBASE No: 2004312254
Multidetector CT urography
Anderson K.E. ; Cowan N.C.
Dr. K.E. Anderson, Department of Radiology, Churchill Hospital, Oxford United Kingdom
Radiology Now (RADIOL. NOW) (United Kingdom) 2004, 21/1 (4-6)
CODEN: RANOF ISSN: 1461-4650
DOCUMENT TYPE: Journal ; Article
LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 8

Anderson K.E. ; Cowan N.C.
MEDICAL DESCRIPTORS:
*computer assisted tomography; *urography; * **urinary** tract disease --congenital **disorder** --cn; * **urinary** tract disease--diagnosis--di

DISREGARD

5/3,K/7 (Item 2 from file: 73)
DIALOG(R)File 73:EMBASE

11488491 EMBASE No: 2002059918
Presence of the eggshell sign in obstructive uropathy
Dewan P.A.; Moon D.; **Anderson K.**
Dr. P.A. Dewan, Urology Unit, Royal Children's Hosital, Flemington Road, Parkville, Melbourne, Vic. 3052 Australia
Urology (UROLOGY) (United States) 2002, 59/2 (287-289)
CODEN: URGYA ISSN: 0090-4295
PUBLISHER ITEM IDENTIFIER: S0090429501015527
DOCUMENT TYPE: Journal ; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 13

Dewan P.A.; Moon D.; **Anderson K.**
MEDICAL DESCRIPTORS:
*hydronephrosis--etiology--et; *hydronephrosis--diagnosis--di; * hydronephrosis--congenital **disorder** --cn; *ultrasound; * **urinary** tract obstruction--etiology--et; *urinary tract obstruction--diagnosis--di; * **urinary** tract obstruction--congenital **disorder** --cn; *diagnostic accuracy

PROBABLY NOT "KIMBERLY"

5/3,K/8 (Item 3 from file: 73)
DIALOG(R)File 73:EMBASE

DISREGARD

11027689 EMBASE No: 2000128044
Cloaca, the most severe degree of imperforate anus: Experience with 195 cases
Hendren W.H.; O'Neill J.A. Jr.; O'Donnell B.; Folkman J.M.; **Moore T.C.**
Dr. W.H. Hendren, Children's Hospital, 300 Longwood Avenue, Boston, MA 02115 United States

Annals of Surgery (ANN. SURG.) (United States) 1998, 228/3 (331-346)
CODEN: ANSUA ISSN: 0003-4932
DOCUMENT TYPE: Journal ; Conference Paper
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 35

Hendren W.H.; O'Neill J.A. Jr.; O'Donnell B.; Folkman J.M.; **Moore T.C.**

...colostomy; 19 had pull-through of the colon, but 3 were subsequently reversed for fecal **incontinence** . Most depend on enemas to evacuate. Urinary dryness was attained in 30 patients, usually by...

5/3,K/9 (Item 4 from file: 73)
DIALOG(R)File 73:EMBASE

10974076 EMBASE No: 2001018178
Cloacal exstrophy: A 25-year experience with 50 cases
Lund D.P.; Hendren W.H.; **Anderson K.**
Dr. D.P. Lund, Department of Surgery, University of Wisconsin, K4/758 Clinical Science Center, 600 Highland Ave, Madison, WI 53792-7375 United States
Journal of Pediatric Surgery (J. PEDIATR. SURG.) (United States) 2001 , 36/1 (68-75)
CODEN: JPDSA ISSN: 0022-3468
DOCUMENT TYPE: Journal ; Conference Paper
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 16

Lund D.P.; Hendren W.H.; **Anderson K.**
MEDICAL DESCRIPTORS:
treatment outcome; urine **incontinence** ; surgical technique; survival rate; feces **incontinence** ; gender; tethered cord syndrome; bladder reconstruction; vagina reconstruction; bladder catheterization; pull through operation; human; male...

5/3,K/10 (Item 5 from file: 73)
DIALOG(R)File 73:EMBASE

07179002 EMBASE No: 1998066344
The malone (antegrade colonic enema) procedure: Early experience
Wilcox D.T.; Kiely E.M.; Wolfson P.J.; **Moore T.C.**
D.T. Wilcox, Department of Paediatric Surgery, Great Ormond Str. Children's Hosp., NHS Trust, Great Ormond St, London WC1N 3JH United Kingdom
Journal of Pediatric Surgery (J. PEDIATR. SURG.) (United States) 1998 , 33/2 (204-206)
CODEN: JPDSA ISSN: 0022-3468
DOCUMENT TYPE: Journal; Conference Paper
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 9

DISREGARD

Wilcox D.T.; Kiely E.M.; Wolfson P.J.; **Moore T.C.**

...study was to assess the results of the Malone (antegrade colonic enema) procedure for fecal **incontinence** . Methods: By a retrospective review of patients treated between 1990 and 1996 in a tertiary...

...a colostomy. Conclusions: The Malone procedure is a simple technique that can effectively control fecal **incontinence** in the majority of cases. It appeared to be better in older children. Stomal stenosis...
MEDICAL DESCRIPTORS:
*feces **incontinence** --surgery--su

5/3,K/11 **(Item 6 from file: 73)**
DIALOG(R)File 73:EMBASE
(c) 2004 Elsevier Science B.V. All rts. reserv.

06775765 EMBASE No: 1997057259
One-stage neonatal pull-through to treat Hirschsprung's disease
Wilcox D.T.; Bruce J.; Bowen J.; Bianchi A.; Neblett W.W.; **Moore T.C.** ; Jona J.Z.; Coran A.G.; Laberge J.-M.; Weitzman J.J.
D.T. Wilcox, GOSHC NHS Trust, Great Ormond St, London WC1 3JH United Kingdom
Journal of Pediatric Surgery (J. PEDIATR. SURG.) (United States) 1997, 32/2 (243-247)
CODEN: JPDSA ISSN: 0022-3468
DOCUMENT TYPE: Journal; Conference Paper
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 11

DISREGARD

Wilcox D.T.; Bruce J.; Bowen J.; Bianchi A.; Neblett W.W.; **Moore T.C.** ; Jona J.Z.; Coran A.G.; Laberge J.-M.; Weitzman J.J.

...the follow-up was greater than 4 years and in this group none were totally **incontinent** . Four patients complained of soiling at least once a week, and 17 had normal bowel...

5/3,K/12 **(Item 7 from file: 73)**
DIALOG(R)File 73:EMBASE
(c) 2004 Elsevier Science B.V. All rts. reserv.

03219603 EMBASE No: 1986107180
Pad tests in children with incontinence
Hellstrom A.-L.; **Anderson K.** ; Hjalmas K.; Jodal U.
Department of Pediatrics, University of Goteborg, Goteborg Sweden
Scandinavian Journal of Urology and Nephrology (SCAND. J. UROL. NEPHROL.) (Sweden) 1986, 20/1 (47-50)
CODEN: SJUNA
DOCUMENT TYPE: Journal
LANGUAGE: ENGLISH

DISREGARD

Pad tests in children with incontinence
Hellstrom A.-L.; **Anderson K.** ; Hjalmas K.; Jodal U.

Different pad tests were compared in 50 **incontinent** children. In a 2-hour ward test with standardized activities and fluid provocation 70% were...

...screening instruments. Further, the simultaneous registration of events gives a more complete picture of the **incontinence** pattern.
MEDICAL DESCRIPTORS:
* **incontinence** ; *primary afferent depolarization

5/3,K/13 (Item 8 from file: 73)
DIALOG(R)File 73:EMBASE
(c) 2004 Elsevier Science B.V. All rts. reserv.

02165015 EMBASE No: 1982144151
Orthotopic ureterocele presenting as swelling at the external urinary meatus
Moore T.
Dept. Urol., Hull Roy. Infirm. (Sutton), Hull HU8 9HE United Kingdom
British Journal of Urology (BR. J. UROL.) (United Kingdom) 1982, 54/2 (197)
CODEN: BJURA
DOCUMENT TYPE: Journal
LANGUAGE: ENGLISH

DISREGARD

Moore T.
MEDICAL DESCRIPTORS:
diagnosis; case report; congenital **disorder** ; **urinary** tract

5/3,K/14 (Item 9 from file: 73)
DIALOG(R)File 73:EMBASE
(c) 2004 Elsevier Science B.V. All rts. reserv.

01754798 EMBASE No: 1980060550
Urinary retention in women
Moore T.
Urol. Registrar, Hull Roy. Infirm., Hull United Kingdom
British Journal of Clinical Practice (BR. J. CLIN. PRACT.) (United Kingdom) 1979, 33/10 (277-279)
CODEN: BJCPA
DOCUMENT TYPE: Journal
LANGUAGE: ENGLISH

DISREGARD

Moore T.

...urinary retention in the last decade. Most of these women had definite gynaecological or lower **urinary** tract pathology. Neurological **disorders** have been less common and constipation and drug induced retention are rarer still. In only...

5/3,K/15 (Item 1 from file: 144)
DIALOG(R)File 144:Pascal
(c) 2004 INIST/CNRS. All rts. reserv.

03289421 PASCAL No.: 81-0328246
TEMPORAL COORDINATION OF REST-ACTIVITY CYCLE, BODY TEMPERATURE, URINARY FREE CORTISOL, AND MOOD IN A PATIENT WITH 48-HOUR UNIPOLAR-DEPRESSIVE CYCLES IN CLINICAL AND TIME-CUE-FREE ENVIRONMENTS
DIRLICH G; KAMMERLOHER A; SCHULZ H; **LUND R** ; DOERR P; VON ZERSSEN D
MAX PLANK INST. PSYCHIATRY/MUNICH, FEDERAL REPUBLIC OF GERMANY
Journal: BIOL. PSYCHIATRY, 1981, 16 (2) 163-179
Language: ENGLISH

DISREGARD

DIRLICH G; KAMMERLOHER A; SCHULZ H; **LUND R** ; DOERR P; VON ZERSSEN D

English Descriptors: DEPRESSION; HUMAN; BIOLOGICAL RHYTHM; CIRCADIAN RHYTHM ; BODY TEMPERATURE; AFFECTIVE **DISORDER** ; MOOD **DISORDER** ; **URINE**

French Descriptors: ETAT DEPRESSIF; RYTHME CIRCADIEN; HYDROCORTISONE; TEMPERATURE CORPORELLE; **URINE** ; **TROUBLE HUMEUR** ; HOMME; **TROUBLE** AFFECTIVITE; RYTHME BIOLOGIQUE

5/3,K/16 (Item 2 from file: 144)
DIALOG(R)File 144:Pascal

02283388 PASCAL No.: 79-0254997
INITIATION OF VOIDING IN HEALTHY WOMEN AND THOSE WITH STRESS INCONTINENCE
RUD T; ULMSTEN U; **ANDERSON K-E**
ULLEVOAL HOSP., OSLO,NORWAY
Journal: ACTA OBSTETR. GYNECOL. SCAND., 1978, 57 (5) 457-462
Language: ENGLISH

INITIATION OF VOIDING IN HEALTHY WOMEN AND THOSE WITH STRESS INCONTINENCE
RUD T; ULMSTEN U; **ANDERSON K-E**

English Descriptors: UROGENITAL SYSTEM DISEASES; VESICAL EMPTYING; HUMAN; URINARY STRESS **INCONTINENCE** ; MICTURITION; TECHNIQUE

French Descriptors: **INCONTINENCE** URINAIRE EFFORT; EVACUATION VESICALE; TECHNIQUE; MICTION; HOMME; APPAREIL UROGENITAL PATHOLOGIE

Spanish Descriptors: APARATO UROGENITAL PATOLOGIA; VACIAMIENTO VESICAL; HOMBRE; **INCONTINENCIA** URINARIA DE ESFUERZO; MICCION; TECNICA

5/3,K/17 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

11803344 PMID: 11991404
What is your diagnosis? Multiple metallic objects, presumed to be BB pellets, in the soft tissues surrounding the pelvis and near the penile urethra.
Sundal Jon A; **Anderson Kari L** ; Feeney Daniel A
Department of Radiology, College of Veterinary Medicine, University of Minnesota, St Paul 55108, USA.
Journal of the American Veterinary Medical Association (United States) May 1 2002, 220 (9) p1293-4, ISSN 0003-1488 Journal Code: 7503067
Document type: Case Reports; Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

Sundal Jon A; **Anderson Kari L** ; Feeney Daniel A
Descriptors: Cat Diseases--radiography--RA; *Foreign Bodies--radiography --RA; *Urethral Obstruction--veterinary--VE; * **Urination Disorders** --veterinary--VE...; Foreign Bodies--complications--CO; Pelvis; Penis; Urethra; Urethral Obstruction--radiography--RA; Urethral Obstruction --surgery--SU; **Urination Disorders** --etiology--ET

5/3,K/18 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

09657113 PMID: 8384769
Developing and testing an instrument to assess the information needs of persons with urinary incontinence .
Moore T F ; Saltmarche A
Perspectives (Gerontological Nursing Association (Canada)) (CANADA) Spring 1993, 17 (1) p2-6, ISSN 0831-7445 Journal Code: 8500942
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

DISREGARD

Developing and testing an instrument to assess the information needs of persons with urinary incontinence .
Moore T F ; Saltmarche A
Descriptors: Nursing Assessment; *Patient Education; *Urinary **Incontinence** --rehabilitation--RH; Adult; Aged; Middle Aged; Models, Nursing; Patient Education--standards--ST; Urinary **Incontinence** --nursing --NU

5/3,K/19 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

07666163 PMID: 3428315
Diurnal variation of mood and the cortisol rhythm in depression and normal states of mind.
von Zerssen D; Doerr P; Emrich H M; **Lund R** ; Pirke K M
Max-Planck-Institut fur Psychiatrie, Munchen, Federal Republic of Germany.
European archives of psychiatry and neurological sciences (GERMANY, WEST) 1987, 237 (1) p36-45, ISSN 0175-758X Journal Code: 8411522
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

DISREGARD

von Zerssen D; Doerr P; Emrich H M; **Lund R** ; Pirke K M
; Adult; Aged; Arousal--physiology--PH; Depressive Disorder--psychology --PX; Depressive **Disorder -- urine** --UR; Middle Aged

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5/3,K/20 (Item 4 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

04857047 PMID: 687064
The measurement of change in sleep during depression and remission.
Schulz H; **Lund R** ; Doerr P
Archiv fur Psychiatrie und Nervenkrankheiten (GERMANY, WEST) Jul 6 1978 , 225 (3) p233-45, ISSN 0003-9373 Journal Code: 1270313
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

DISREGARD

Schulz H; **Lund R** ; Doerr P
; Adult; Circadian Rhythm; Depression--urine--UR; Electroencephalography; Electromyography; Electrooculography; Hydrocortisone--urine--UR; Remission,

Spontaneous; Sleep **Disorders -- urine** --UR; Sleep Stages

5/3,K/21 (Item 5 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

04348753 PMID: 1243982
The female prostate updated.
Moore T
European urology (SWITZERLAND) 1975, 1 (1) p32-5, ISSN 0302-2838
Journal Code: 7512719
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

DISREGARD

Moore T
...; Aged; Urethra--pathology--PA; Urethra--surgery--SU; Urethral Diseases--complications--CO; Urethral Neoplasms--complications--CO; **Urination Disorders** --pathology--PA

5/3,K/22 (Item 6 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

04121061 PMID: 1180991
Non-parasitic chyluria (presenting with urinary retention).
Taylor T V; Strachan A W; Isherwood I; **Moore T**
British journal of urology (ENGLAND) Aug 1975, 47 (4) p419-23, ISSN 0007-1331 Journal Code: 15740090R
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

DISREGARD

Taylor T V; Strachan A W; Isherwood I; **Moore T**
Descriptors: Chyle; *Kidney Diseases--diagnosis--DI; * **Urination Disorders** --diagnosis--DI; * **Urine** ...; Diseases--etiology--ET; Lipids --urine--UR; Lymphatic System--abnormalities--AB; Lymphography; Urinary Tract--abnormalities--AB; **Urination Disorders** --etiology--ET; Urography

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5/3,K/23 (Item 7 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

03519876 PMID: 4690149
The types of neuropathic bladder dysfunction associated with prolapsed lumbar intervertebral discs.
Jones D L; **Moore T**
British journal of urology (ENGLAND) Feb 1973, 45 (1) p39-43, ISSN 0007-1331 Journal Code: 15740090R
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

DISREGARD

Jones D L; **Moore T**

; Adult; Cystoscopy; **Enuresis** --etiology--ET; Intervertebral Disk Displacement--surgery--SU; Middle Aged; Myelography; Urinary **Incontinence** --etiology--ET

5/3,K/24 (Item 8 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

03493243 PMID: 4648454
Relationship of lithium metabolism to mental hospital admission and homicide.
Dawson E B; **Moore T D** ; McGanity W J
Diseases of the nervous system (UNITED STATES) Aug 1972, 33 (8) p546-56, ISSN 0012-3714 Journal Code: 0370666
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

Dawson E B; **Moore T D** ; McGanity W J
; Aggression--drug effects--DE; Hospitals, Psychiatric; Lithium--analysis --AN; Lithium-- **urine** --UR; Neurotic **Disorders** --metabolism--ME; Personality Disorders--metabolism--ME; Psychotic Disorders--metabolism--ME; Schizophrenia--metabolism--ME; Suicide; Texas

DISREGARD

5/3,K/25 (Item 9 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

03421791 PMID: 4538399
Treating incontinence **electrically.**
Moore T
British medical journal (ENGLAND) Sep 2 1972, 3 (826) p589, ISSN 0007-1447 Journal Code: 0372673
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

Treating incontinence **electrically.**
Moore T
Descriptors: Electric Stimulation Therapy; *Urinary **Incontinence** --therapy--TH

DISREGARD

5/3,K/26 (Item 10 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

02264361 PMID: 6028102
Treatment of stress incontinence **by maximum perineal electrical stimulation.**
Moore T ; Schofield P F
British medical journal (ENGLAND) Jul 15 1967, 3 (558) p150-1, ISSN 0007-1447 Journal Code: 0372673
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM

DISREGARD

Record type: Completed

Treatment of stress incontinence **by maximum perineal electrical stimulation.**
Moore T ; Schofield P F
Descriptors: Electric Stimulation; *Perineum--physiology--PH; *Urinary **Incontinence** , Stress--therapy--TH; Adult; Middle Aged; Urinary **Incontinence** , Stress--etiology--ET

5/3,K/27 (Item 11 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

00251527 PMID: 14130834
THE MANAGEMENT OF INCONTINENCE **OF URINE IN THE ADULT.**
MOORE T
Practitioner (ENGLAND) Mar 1964, 192 p376-84, ISSN 0032-6518
Journal Code: 0404245
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

DISREGARD

THE MANAGEMENT OF INCONTINENCE **OF URINE IN THE ADULT.**
MOORE T
Identifiers: ADOLESCENCE; *BLADDER FISTULA; *GERIATRICS; *METHANTHELINE; *PATHOLOGY; *PROSTATECTOMY; *SURGERY, OPERATIVE; *URINARY CATHETERIZATION; *URINARY FISTULA; *URINARY **INCONTINENCE** ; *URINARY **INCONTINENCE** , STRESS; *VESICOVAGINAL FISTULA; *VITAMIN B 12

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Set     Items   Description
S1       5638   AU=(NEISZ J? OR NEISZ, J? OR LUND R? OR LUND, R? OR ANDERS-
            ON K? OR ANDERSON, K? OR VANDERSLOOT V? OR VANDERSLOOT, V? OR
            MOORE T? OR MOORE, T? OR BOUCHIER M? OR BOUCHIER, M? OR MORNI-
            NGSTAR R? OR MORNINGSTAR, R? OR ROCHELEAU G? OR ROCHE...
S2       2243   JOHAN?(2N)NEISZ OR (ROBERT OR BOB OR ROB)(2N)LUND OR (KIM -
            OR KIMBERLY)(2N)ANDERSON OR VICKI?(2N)VANDERSLOOT OR (TERENCE?
             OR TERR?)(2N)MOORE OR MARK(2N)BOUCHIER OR RAND?(2N)MORNINGST-
            AR OR GARY(2N)ROCHELEAU
S3      32469   INCONTINEN? OR ENURES? OR DYSURES? OR (LACK OR DYSFUNCTION?
             OR TROUBL? OR DISORDER?)(3N)(URIN? OR UROL? OR URETHR? OR MI-
            CTUR? OR MINGEN?)
S4         12   S1:S2 AND S3
S5          8   RD (unique items)
? show files
File   9:Business & Industry(R) Jul/1994-2004/Oct 27
         (c) 2004  The Gale Group
File  15:ABI/Inform(R) 1971-2004/Oct 27
         (c) 2004 ProQuest Info&Learning
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         (c) 2004 F-D-C reports Inc.
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         (c) 2004 The Gale group
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         (c) 2004 The HW Wilson Co.
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         (c) 2004 PJB Publications, Ltd.
File 130:PHIND(Daily & Current) 2004/Oct 27
         (c) 2004 PJB Publications,Ltd.
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         (c) 2004 NewsRx
File 148:Gale Group Trade & Industry DB 1976-2004/Oct 15
         (c)2004 The Gale Group
File 149:TGG Health&Wellness DB(SM) 1976-2004/Oct W2
         (c) 2004 The Gale Group
File 160:Gale Group PROMT(R) 1972-1989
         (c) 1999 The Gale Group
File 369:New Scientist 1994-2004/Oct W3
         (c) 2004 Reed Business Information Ltd.
File 370:Science 1996-1999/Jul W3
         (c) 1999 AAAS
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         (c) 2004 ESPICOM Bus.Intell.
File 444:New England Journal of Med. 1985-2004/Oct W3
         (c) 2004 Mass. Med. Soc.
File 621:Gale Group New Prod.Annou.(R) 1985-2004/Oct 28
         (c) 2004 The Gale Group
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← Q SIGNIFICANT HITS AFTER REVIEW

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Set     Items   Description
S1       9374   INCONTINEN? OR ENURES? OR DYSURES? OR (LACK OR DYSFUNCTION?
             OR TROUBL? OR DISORDER?)(3N)(URIN? OR UROL? OR URETHR? OR MI-
             CTUR? OR MINGEN?)(3N)(CONTROL? OR EVACUAT? OR ELIMINAT? OR EX-
             CRET?)
S2      64489   (SURG? OR CHIRURG? OR MEDIC?)(5N)(FIX OR FIXE? OR FIXING OR
             OVERHAUL? OR RECONSTRUCT? OR OPERAT? OR REPAIR? OR REPARAT? -
             OR TREAT? OR REBUIL?)
S3       7486   (SURG? OR CHIRURG? OR MEDIC?)(5N)(SUSPEN? OR MEND? OR RECT-
             IF? OR REMED? OR CORRECT? OR CURE? OR CURING? OR RESTOR?)
S4        383   (SURG? OR CHIRURG? OR MEDIC?)(5N)(RECONSTIT? OR REHABIL? OR
             VAGINOPLAST? OR PARAVAGINOPLAST?)
S5    2644071   KIT OR KITS OR PACKAG? OR ASSEMBL? OR COLLECTION? OR EQUIP-
             MENT?
S6     125502   STYLET? OR NEEDL? OR TROCAR?
S7       7476   (SUTUR? OR DILAT? OR PUNCTUR? OR PERFORAT?)(5N)(INSTRUMENT?
             OR IMPLEMENT? OR TOOL? ? OR APPLIANC? OR UTENSIL? OR DEVIC?)
S8     162001   (INCIS? OR CUT OR CUTS OR CUTTING OR ELONGAT? OR LONG? OR -
             SLENDER? OR SLIM OR ATTENUAT? OR TAPER?)(5N)(INSTRUMENT? OR I-
             MPLEMENT? OR TOOL? ? OR APPLIANC? OR UTENSIL? OR DEVIC?)
S9    1398550   SLING? OR STRAP? OR STRIP? OR BAND? OR HAMMOCK? OR MESH? OR
             TAPE? OR TENSIONER? OR TENSIONING?
S10      7827   (IMPLANT? OR EMPLANT? OR INGRAFT? OR ENGRAFT? OR EMPLAC? OR
             IMPLAC? OR AFFIX?)(3N)(MATERIAL? OR SUBSTANC?)
S11     80782   (SHEATH? OR COVER?)(3N)(SHARP? OR CUT OR CUTTING OR CUTS OR
             OUTER? OR EXTEN? OR RETRACT? OR LOCK?)
S12      8540   BLUNT? OR DULL OR OBTUND?
S13    540678   STRAIGHT? OR UNBENT? OR UNBOWED? OR LINEAR?
S14    580672   CURV? OR ARCUAT? OR BENT? OR BOWED? OR ARCHED? OR CRESCEN?
S15     12393   (DETECT? OR SENS? OR TRANSDUC?)(3N)(HOLE? OR PERFORAT? OR -
             PUNCTUR? OR BLADDER?)
S16    608220   HANDL? OR HANDGRIP? OR GRIP? OR HILT?
S17   1615589   DIFFEREN? OR DISSIMILAR? OR DISIMILAR? OR UNLIKE? OR UNALI-
             KE OR "NOT"()ALIKE
S18     35784   ADAPTER?
S19     11861   VAGIN? OR SUPRAPUB?
S20    205066   PROCEDUR?
S21   4284574   METHOD? ?
S22   2504276   PROCESS??
S23   3112729   SYSTEM?
S24    228213   TECHNIQU?
S25    106711   IC=A61F?
S26        33   S1 AND S2:S4 AND S5:S8 AND S9:S10
S27       100   S1 AND S2:S4 AND S5:S8
S28        34   S27 AND S11:S14
S29        38   S27 AND S15:S19
S30        84   S27 AND S20:S25
S31       141   S1 AND S5:S8 AND S9:S10 AND S11:S19
S32        56   S27 AND S5
S33        90   S31 AND S25
S34       141   S31 OR S33
S35        29   S34 AND (S6:S8 OR S16)(5N)(S11:S14 OR S17)
S36        29   S27 AND (S6:S8 OR S16)(5N)(S11:S14 OR S17)
S37       101   S26 OR S28:S29 OR S32 OR S35:S36
S38        90   S31 AND S33
S39        90   S38 AND S25
S40       166   S37:S39
S41       166   IDPAT (sorted in duplicate/non-duplicate order)
? show files
File 347:JAPIO Nov 1976-2004/Jun(Updated 041004)
         (c) 2004 JPO & JAPIO
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File 350:Derwent WPIX 1963-2004/UD,UM &UP=200467
(c) 2004 Thomson Derwent
? pause
?

41/3,K/7 (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.

014779333 **Image available**
WPI Acc No: 2002-600039/200264
Related WPI Acc No: 2002-600038; 2002-600040
XRPX Acc No: N02-475642

Surgical **instrument for the** treatment **of female** incontinence **has a** curved needle **, with a clamped** handle **, to insert a ribbon in a supporting loop at the connective tissue on both sides of the urethra, without bladder damage**

Patent Assignee: BACHMANN K (BACH-I); GAISELMANN T (GAIS-I); MARZUSCH K (MARZ-I); RIEK S (RIEK-I); WALLWIENER D (WALL-I)
Inventor: BACHMANN K; GAISELMANN T; MARZUSCH K; RIEK S; WALLWIENER D
Number of Countries: 100 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200265922	A1	20020829	WO 2002EP1426	A	20020212	200264	B
AU 2002254890	A1	20020904	AU 2002254890	A	20020212	200427	

17 FEB 2001 German priority

Priority Applications (No Type Date): DE 1007520 A 20010217
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200265922	A1	G	26	A61B-017/06	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW

AU 2002254890 A1 A61B-017/06 Based on patent WO 200265922

Surgical **instrument for the** treatment **of female** incontinence **has a** curved needle **, with a clamped** handle **, to insert a ribbon in a supporting loop at the connective tissue on both sides...**

Abstract (Basic):

... The **surgical** instrument, for the **treatment** of female **incontinence** , has at least one **curved needle** (10) with a pointed tip (12) to take a ribbon (26) of a resorbable or non-resorbable thread material. The ribbon is attached to the **needle** by a release fitting. A **handle** (16) is in a release mounting at an end section (14) of the **needle** , and is secured by a clamping screw (20) so that the **needle** is held firmly axially and cannot rotate.

... The **needle** is for the insertion of a ribbon from the **vagina** on both sides of the urethra to the abdominal wall, forming a supporting loop for the connective tissue, in the treatment of female **incontinence** .

...

...The drawing shows a schematic view of the **surgical** instrument to **treat** female **incontinence** .

...

... **curved needle** (10...

...pointed **needle** tip (12...
...end section of the **needle** (14...

... handle (16
...Title Terms: INCONTINENCE ;

41/3,K/9 (Item 9 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2004 Thomson Derwent. All rts. reserv.

013698188 **Image available**
WPI Acc No: 2001-182412/200118
Related WPI Acc No: 2001-041248; 2001-091136; 2003-041522; 2003-617537; 2003-637067
XRPX Acc No: N01-130255
Visually directed surgical **instrument for** treating **female urinary** incontinence **, has lumen which extends from proximal to distal ends of** curving needle **to allow optical device to pass through** needle
Patent Assignee: ETHICON INC (ETHI)
Inventor: MILLER G H
Number of Countries: 094 Number of Patents: 008
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200074613	A1	20001214	WO 2000US15215	A	20000601	200118	B
AU 200053153	A	20001228	AU 200053153	A	20000601	200119	
EP 1194091	A1	20020410	EP 2000938064	A	20000601	200232	
			WO 2000US15215	A	20000601		
KR 2002033636	A	20020507	KR 2001715866	A	20011210	200271	
US 6475139	B1	20021105	US 99138231	P	19990609	200276	
			US 2000573645	A	20000518		
JP 2003501144	W	20030114	WO 2000US15215	A	20000601	200306	
			JP 2001501152	A	20000601		
CN 1409625	A	20030409	CN 2000811144	A	20000601	200345	
AU 770937	B2	20040311	AU 200053153	A	20000601	200454	

18 MAY 2000

Priority Applications (No Type Date): US 2000573645 A 20000518; US 99138231 P 19990609
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200074613	A1	E	46	A61F-005/48	
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW				
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW					
AU 200053153	A				Based on patent WO 200074613
EP 1194091	A1	E		A61F-005/48	Based on patent WO 200074613
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
KR 2002033636	A			A61F-002/02	
US 6475139	B1			A61B-001/307	Provisional application US 99138231
JP 2003501144	W		51	A61B-017/34	Based on patent WO 200074613
CN 1409625	A			A61F-005/48	
AU 770937	B2			A61F-005/48	Previous Publ. patent AU 200053153 Based on patent WO 200074613

Visually directed surgical **instrument for** treating **female urinary** incontinence **, has lumen which extends from proximal to distal ends of** curving needle **to allow optical device to pass through** needle

Abstract (Basic):
... A lumen (100) extends from a segment attachment (20) at the proximal end of a **curved needle** (10), into a **curved** shaft (18) through the **needle** body, and to a conical section (14) at the distal end of the shaft. The...
... The **needle** is used in entering a **mesh tape** into and under

a urethra through a lower abdomen or a pelvic tissue. The **tape** supports the urethra. The placing of the **tape** underneath the urethra can be viewed through the eyepiece of the endoscope, with the eyepiece positioned outside of the **needle** . An INDEPENDENT CLAIM is also included for a female urinary **incontinence** treatment method...

...For treating female urinary **incontinence** or e.g. stress urinary **incontinence** SUI, which is caused by functional defect of tissue or ligaments connecting **vaginal** wall with pelvic muscles and pubic bone, or by e.g. childbirth, straining of pelvic...

...Allows surgeon to view tissue or other vital organs that surrounds urethra through **needle** , while entering **needle** and **mesh** **tape** through lower abdomen of female patient. Reduces risk of perforating or damaging surrounding tissues, while placing **tape** under urethra...

...The figure shows the schematic diagram of a **needle** used as a **surgical** instrument for female urinary **incontinence** **treatment** .

...

... **Curved** **needle** (10...
... **Curved** shaft (18
...Title Terms: **INCONTINENCE** ;
...International Patent Class (Main): **A61F-002/02** ...

... **A61F-005/48**
...International Patent Class (Additional): **A61F-005/37**

41/3,K/10 (Item 10 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013557041 **Image available**
WPI Acc No: 2001-041248/200105
Related WPI Acc No: 2001-091136; 2001-182412; 2003-041522; 2003-166705; 2003-617537; 2003-625380; 2003-637067
XRPX Acc No: N01-030744

Surgical **instrument for** treating **female urinary** incontinence

Patent Assignee: ETHICON INC (ETHI); CHEN C (CHEN-I); LEHE J (LEHE-I); LUSCOMBE B H (LUSC-I); HOEPFFNER H (HOEP-I); KAMMERER G W (KAMM-I); LANDGREBE S (LAND-I); LUSCOMBE B (LUSC-I)
Inventor: CHEN C; LEHE J; LUSCOMBE B H; HOEPFFNER H; KAMMERER G W; LANDGREBE S; LUSCOMBE B
Number of Countries: 091 Number of Patents: 011
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200074594	A1	20001214	WO 2000US12763	A	20000510	200105 B
AU 200047105	A	20001228	AU 200047105	A	20000510	200119
US 6273852	B1	20010814	US 99138231	P	19990609	200148
			US 2000521801	A	20000309	
US 20010049467	A1	20011206	US 99138231	P	19990609	200203
			US 2000521801	A	20000309	
			US 2001883565	A	20010618	
EP 1200011	A1	20020502	EP 2000928947	A	20000510	200236
			WO 2000US12763	A	20000510	
US 20020077526	A1	20020620	US 99138231	P	19990609	200244
			US 2000521801	A	20000309	
			US 2001873571	A	20010604	
KR 2002033636	A	20020507	KR 2001715866	A	20011210	200271
KR 2002033637	A	20020507	KR 2001715894	A	20011210	200271
JP 2003523786	W	20030812	WO 2000US12763	A	20000510	200355
			JP 2001501133	A	20000510	
CN 1433288	A	20030730	CN 2000811349	A	20000510	200365
BR 200011726	A	20030805	BR 200011726	A	20000510	200365
			WO 2000US12763	A	20000510	

Priority Applications (No Type Date): US 2000521801 A 20000309; US 99138231 P 19990609; US 2001883565 A 20010618; US 2001873571 A 20010604; US 2000573645 A 20000518
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200074594	A1	E	42	A61F-002/02	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ ES FI GB GD GE GH GM HR HU ID IL IN JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW

AU 200047105	A			Based on patent WO 200074594
US 6273852	B1		A61F-002/00	Provisional application US 99138231
US 20010049467	A1		A61F-002/02	Provisional application US 99138231
				Cont of application US 2000521801
				Cont of patent US 6273852
EP 1200011	A1	E	A61F-002/02	Based on patent WO 200074594

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

US 20020077526	A1		A61F-002/02	Provisional application US 99138231

CIP of application US 2000521801

KR 2002033636 A A61F-002/02
KR 2002033637 A A61F-002/02
JP 2003523786 W 48 A61B-017/00 Based on patent WO 200074594
CN 1433288 A A61F-002/02
BR 200011726 A A61F-002/02 Based on patent WO 200074594

Surgical **instrument for** treating **female urinary** incontinence

Abstract (Basic):

... The instrument includes a **curved needle** -like element defining in part a **curved** shaft having a distal end and a proximal end. The diameter of the **needle** decreases from the proximal end to the distal end, and the **needle** terminates in a **blunt** tip. A **tape** (12) attaches to the **needle** for implanting into the lower abdomen of a female to provide support to the urethra. The **tape** may be made from synthetic and natural materials. The **needle** and **tape** may also be modified to allow the surgeon to attach and detach the **tape** during the **surgical operation** .

... For treating female urinary **incontinence** .

...

...It requires a reduced maximum force to pass the **tape** through body tissue...

...The figure shows a side view of two **needles** and a **tape** .

...

... **tape** (12

...Title Terms: **INCONTINENCE**

...International Patent Class (Main): **A61F-002/00** ...

... **A61F-002/02**

41/3,K/11 (Item 11 from file: 350)
DIALOG(R)File 350:Derwent WPIX

011257722 **Image available**
WPI Acc No: 1997-235625/199721
Related WPI Acc No: 1996-160093
XRAM Acc No: C97-075525
XRPX Acc No: N97-194864

Surgical instrument for implanting netting sling **around urethra to treat female urinary** incontinence **- has two** curved needles **and** handled **shank and uses polypropylene netting in removable protective polyethylene sheath**

Patent Assignee: MEDSCAND MEDICAL AB (MEDS-N); MEDSCAND AB (MEDS-N); ETHICON INC (ETHI); ULMUS KB (ULMU-N); ULMSTEN U (ULMS-I)
Inventor: ULMSTEN U; CLAREN J
Number of Countries: 030 Number of Patents: 019
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9713465	A1	19970417	WO 96SE1269	A	19961008	199721	B
SE 9503512	A	19970410	SE 953512	A	19951009	199726	
AU 9673502	A	19970430	AU 9673502	A	19961008	199734	
SE 506164	C2	19971117	SE 953512	A	19951009	199801	
EP 854691	A1	19980729	EP 96935678	A	19961008	199834	
			WO 96SE1269	A	19961008		
CN 1200658	A	19981202	CN 96197478	A	19961008	199916	
US 5899909	A	19990504	US 97804680	A	19970225	199925	
AU 704712	B	19990429	AU 9673502	A	19961008	199928	
JP 11514266	W	19991207	WO 96SE1269	A	19961008	200008	
			JP 97514979	A	19961008		
RU 2161916	C2	20010120	RU 96101792	A	19960130	200120	
EP 1151722	A2	20011107	EP 96935678	A	19961008	200168	
			EP 2001203180	A	19961008		
EP 1159921	A2	20011205	EP 96935678	A	19961008	200203	
			EP 2001203181	A	19961008		
EP 854691	B1	20020102	EP 96935678	A	19961008	200205	
			WO 96SE1269	A	19961008		
			EP 2001203180	A	19961008		
			EP 2001203181	A	19961008		
DE 69618650	E	20020228	DE 96618650	A	19961008	200223	
			EP 96935678	A	19961008		
			WO 96SE1269	A	19961008		
ES 2170880	T3	20020816	EP 96935678	A	19961008	200265	
US 20020165566	A1	20021107	WO 96SE1269	A	19961008	200275	
			US 9851311	A	19980727		
			US 2002179364	A	20020625		
US 6491703	B1	20021210	WO 96SE1269	A	19961008	200301	
			US 9851311	A	19980727		
EP 1151722	B1	20040804	EP 96935678	A	19961008	200451	
			EP 2001203180	A	19961008		
DE 69633078	E	20040909	DE 96633078	A	19961008	200459	
			EP 2001203180	A	19961008		

Priority Applications (No Type Date): SE 953512 A 19951009; SE 942872 A 19940830
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9713465	A1	E	16	A61B-017/04	

Designated States (National): AU CA CN JP US
Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE

SE 9503512	A		A61B-017/42	
AU 9673502	A		A61B-017/04	Based on patent WO 9713465
SE 506164	C2		A61B-017/42	
EP 854691	A1 E		A61B-017/04	Based on patent WO 9713465
Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE				
CN 1200658	A		A61B-017/04	
US 5899909	A		A61B-017/42	
AU 704712	B		A61B-017/04	Previous Publ. patent AU 9673502 Based on patent WO 9713465
JP 11514266	W	19	A61B-017/04	Based on patent WO 9713465
RU 2161916	C2		A61B-017/00	
EP 1151722	A2 E		A61B-017/04	Div ex application EP 96935678 Div ex patent EP 854691
Designated States (Regional): AL DE DK ES FI FR GB IT LT LV MK RO SE SI				
EP 1159921	A2 E		A61B-017/04	Div ex application EP 96935678 Div ex patent EP 854691
Designated States (Regional): DE DK ES FI FR GB IT SE				
EP 854691	B1 E		A61B-017/04	Related to application EP 2001203180 Related to application EP 2001203181 Related to patent EP 1151722 Related to patent EP 1159921 Based on patent WO 9713465
Designated States (Regional): DE DK ES FI FR GB IT SE				
DE 69618650	E		A61B-017/04	Based on patent EP 854691 Based on patent WO 9713465
ES 2170880	T3		A61B-017/04	Based on patent EP 854691
US 20020165566	A1		A61B-017/10	Cont of application WO 96SE1269 Cont of application US 9851311
US 6491703	B1		A61B-017/04	Based on patent WO 9713465
EP 1151722	B1 E		A61B-017/04	Div ex application EP 96935678 Div ex patent EP 854691
Designated States (Regional): DE DK ES FI FR GB IT SE				
DE 69633078	E		A61B-017/04	Based on patent EP 1151722

Surgical instrument for implanting netting sling **around urethra to treat female urinary** incontinence - ...

...**has two** curved needles **and** handled **shank and uses polypropylene netting in removable protective polyethylene sheath**

...Abstract (Basic): A **surgical** instrument for **treating** female urinary **incontinence** has a shank with a **handle** at one end, and two **curved needles** (21) each attached at one end to one end of a **tape** to be implanted and connectable singly to the shank to form a **curved** part at the other end. Each **needle** can be passed into the body via the anterior sub-urethral **vaginal** wall to extend from the wall inside surface over the back of the pubic bone to the outside of the abdominal wall. The **tape** is of netting (26) enclosed by a thin plastic sheath (34...

...Pref. the **tape** enclosed by a thin plastic sheath (34), is pref. polypropylene netting in a polyethylene sheath perforated at its longitudinal centre and the netting and sheath interconnected by stitching (35). Each **needle** has a non-circular end (30) fitting in a matching shank socket and joined by a conical part (32) to a **needle** shoulder (33), with netting and sheath glued to the conical part and the attachment covered...

...USE - For implanting a **sling** around the urethra...

...ADVANTAGE - The sheath protects the netting during attachment to the **needles** and **handling** , facilitates netting insertion, avoids tissue irritation by the netting, and easily be removed after insertion...

...Title Terms: **SLING** ;

...International Patent Class (Additional): **A61F-002/00**

41/3,K/23 (Item 23 from file: 350)
DIALOG(R)File 350:Derwent WPIX

016261599 **Image available**
WPI Acc No: 2004-419493/200439
Related WPI Acc No: 2002-454214
XRPX Acc No: N04-332981
Surgical **device for** treating **urinary** incontinence , **includes** sling **with distal end coupled to proximal end of dilator such that dilator has distal end coupled to proximal end of** curved needle
Patent Assignee: SCIMED LIFE SYSTEMS INC (SCIM-N)
Inventor: GELLMAN B N
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20040106846	A1	20040603	US 2000248808	P	20001115	200439 B
			US 2001992359	A	20011114	
			US 2003723334	A	20031126	

ISNOU 2000

Priority Applications (No Type Date): US 2000248808 P 20001115; US 2001992359 A 20011114; US 2003723334 A 20031126
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20040106846	A1		11	A61F-002/02	Provisional application US 2000248808
					Cont of application US 2001992359
					Cont of patent US 6689047

Surgical **device for** treating **urinary** incontinence , **includes** sling **with distal end coupled to proximal end of dilator such that dilator has distal end coupled to proximal end of** curved needle

Abstract (Basic):
... The surgical device (10) includes a **sling** (50) with a distal end coupled to the proximal end of a dilator (40). The dilator has a distal end coupled to the proximal end of a **curved needle** (20).
... An INDEPENDENT CLAIM is also included for a method of treating urinary **incontinence** .
...

...Used for treating urinary **incontinence** in women resulting from intrinsic sphincter deficiency...

...Provides a **surgical** device that can reliably **treat** urinary **incontinence** .
...
... **Curved needle** (20...

... **Sling** (50
...Title Terms: **INCONTINENCE** ;
International Patent Class (Main): **A61F-002/02**

41/3,K/56 (Item 56 from file: 350)
DIALOG(R)File 350:Derwent WPIX

015555382 **Image available**
WPI Acc No: 2003-617537/200358
Related WPI Acc No: 2001-041248; 2001-091136; 2001-182412; 2003-041522; 2003-166705; 2003-625380; 2003-637067
XRPX Acc No: N03-491904

Surgical **instrument for** treating **female patient suffering from urinary** incontinence , **includes coupler which couples end of one** curve needle **to corresponding end of guide** needle

Patent Assignee: ETHICON INC (ETHI)
Inventor: ANGELINI L; HOEPFFNER H; KAMMERER G W; LANDGREBE S; LEHE J; LUSCOMBE B; ULMSTEN U
Number of Countries: 032 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20030149440	A1	20030807	US 99138231	P	19990609	200358	B
			US 2000521801	A	20000309		
			US 2001873571	A	20010604		
			US 2002285281	A	20021031		
EP 1417934	A2	20040512	EP 2003256856	A	20031030	200431	

Priority Applications (No Type Date): US 99138231 P 19990609; US 2000521801 A 20000309; US 2001873571 A 20010604; US 2002285281 A 20021031
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20030149440	A1		53	A61B-017/08	Provisional application US 99138231
					CIP of application US 2000521801
					CIP of application US 2001873571
					CIP of patent US 6273852
EP 1417934	A2	E		A61B-017/04	

Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR

Surgical **instrument for** treating **female patient suffering from urinary** incontinence , **includes coupler which couples end of one** curve needle **to corresponding end of guide** needle

Abstract (Basic):

... The instrument includes a guide **needle** which leads the implanting of a guide **mesh** (12) into the lower abdomen of the female patient, through **curve needles** (10a,10b). The **curve needles** are coupled to both ends of the guide **mesh** . The end of the guide **needle** is connected via coupler to the corresponding end of one **curve needle** .

... An INDEPENDENT CLAIM is also included for a urinary **incontinence** treatment method...

...For treating female patient suffering from urinary **incontinence** .

...

...Allows using of instrument in trans- **vaginal** or trans-abdominal procedure. Ensures reliable implantation of guide **mesh** into lower abdomen of female patient...

...figure shows the explanatory diagram of the surgical instrument, during the insertion of the guide **mesh** .

...

... **Curve needles** (10a,10b...

...Guide **mesh** (12
...Title Terms: **INCONTINENCE** ;
...International Patent Class (Additional): **A61F-002/00**

41/3,K/70 (Item 70 from file: 350)
DIALOG(R)File 350:Derwent WPIX

015106188 **Image available**
WPI Acc No: 2003-166705/200316
Related WPI Acc No: 2001-041248; 2001-091136; 2003-041522; 2003-617537; 2003-625380; 2003-637067
XRPX Acc No: N03-131768

Surgical **instrument for** treating **female urinary** incontinence , **has** mesh **for implanting into lower abdomen of female to provide support to urethra and coupler for attachment to distal ends of two** needles

Patent Assignee: HOEPFFNER H (HOEP-I); KAMMERER G W (KAMM-I); LANDGREBE S (LAND-I); LUSCOMBE B (LUSC-I)
Inventor: HOEPFFNER H; KAMMERER G W; LANDGREBE S; LUSCOMBE B
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20020188169	A1	20021212	US 99138231	P	19990609	200316 B
			US 2000521801	A	20000309	
			US 2001873571	A	20010604	
			US 2002191572	A	20020709	

Priority Applications (No Type Date): US 99138231 P 19990609; US 2000521801 A 20000309; US 2001873571 A 20010604; US 2002191572 A 20020709
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020188169	A1		42	A61F-002/02	Provisional application US 99138231
					CIP of application US 2000521801
					CIP of application US 2001873571
					CIP of patent US 6273852

Surgical **instrument for** treating **female urinary** incontinence , **has** mesh **for implanting into lower abdomen of female to provide support to urethra and coupler for attachment to distal ends of two** needles

Abstract (Basic):
... The surgical instrument has a **mesh** (12) for implanting into the lower abdomen of a female to provide support to the urethra, and a coupler for simultaneous attachment to the distal ends of two **needles** (10a,10b). The first **curved needle** defines a portion of a **curved** shaft whose proximal end is attached to the **mesh** . The second **curved needle** is formed with distal and proximal ends.
... For treating female stress urinary **incontinence** (SUI...

...Implants a **mesh** for treatment of SUI. Capable for use in trans-**vaginal** or trans-abdominal procedure. Useful across **different** medical specialties depending on preferred surgical approaches. Uses **mesh** that provides a structure means for tissue ingrowth, and thereby provide a newly created body tissue supporting means for the urethra. Uses **mesh** that provides support to the urethra, allowing it to keep its seal and prevent unwanted...

...The figure shows the side view of two **needles** and a **mesh** interconnecting the **needles** .
...

... **Needles** (10a,10b...

... **Mesh** (12

...Title Terms: **INCONTINENCE** ;
International Patent Class (Main): **A61F-002/02**

41/3,K/80 (Item 80 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014981007 **Image available**
WPI Acc No: 2003-041522/200303
Related WPI Acc No: 2001-041248; 2001-091136; 2001-182412; 2003-166705; 2003-617537; 2003-625380; 2003-637067
XRPX Acc No: N03-032570

Adaptable surgical instrument kit **for female urinary** incontinence **has** curved needles **and coupler for attaching to guide** needle

Patent Assignee: ETHICON INC (ETHI); ETHICON GMBH (ETHI); ETHICON GMBH & CO KG (ETHI)
Inventor: HOEPFFNER H; KAMMERER G W; LANDGREBE S; LUSCOMBE B
Number of Countries: 100 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200298322	A1	20021212	WO 2002US14770	A	20020510	200303	B
EP 1399088	A1	20040324	EP 2002776559	A	20020510	200421	
			WO 2002US14770	A	20020510		
AU 2002345375	A1	20021216	AU 2002345375	A	20020510	200452	
KR 2004048877	A	20040610	KR 2003715877	A	20031204	200466	

Priority Applications (No Type Date): US 2001873571 A 20010604

4 June 2001

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200298322	A1	E	53	A61F-002/00	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW

EP 1399088 A1 E A61F-002/00 Based on patent WO 200298322
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

AU 2002345375 A1 A61F-002/00 Based on patent WO 200298322

KR 2004048877 A A61F-002/02

Adaptable surgical instrument kit **for female urinary** incontinence **has** curved needles **and coupler for attaching to guide** needle

Abstract (Basic):

... A guide **needle** is passed through the abdomen (60), along one side of the urethra (54) and to an incision at the anterior **vaginal** wall. The guide is coupled to a **curved needle** (10a) which is passed back along the same path. The guide is again passed through but to the other side of the urethra. A second **curved needle** (10b) is passed back. The **needles** place the **mesh** (12) to create a support.

... For treating female stress urinary **incontinence** (SUI...

... **Mesh** can be implanted through a trans- **vaginal** approach or a trans-abdominal approach...

...The diagram shows an initial step of a trans-abdominal method utilizing two **needles** and guide **needle** to treat SUI...

... **Needle** (10a...

... **Needle** (10b...

... **Mesh** (12...

... **Handle** (21...

... **Vagina** (50
Technology Focus:
... An exemplary material for the **mesh** is PROLENE polypropylene.
...Title Terms: **KIT** ;
International Patent Class (Main): **A61F-002/00** ...

... **A61F-002/02**

41/3,K/81 **(Item 81 from file: 350)**
DIALOG(R)File 350:Derwent WPIX

014902924 **Image available**
WPI Acc No: 2002-723630/200278
XRAM Acc No: C03-023874
XRPX Acc No: N03-074616
Surgical tool for introducing surgical **implant into human body for** treating **female urinary** incontinence , **comprises elongate shaft and implant carrier member**
Patent Assignee: GYNE IDEAS LTD (GYNE-N)
Inventor: BROWNING J
Number of Countries: 100 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200278548	A1	20021010	WO 2002GB1270	A	20020402	200278	B
AU 2002244830	A1	20021015	AU 2002244830	A	20020402	200432	

Priority Applications (No Type Date): GB 20018083 A 20010330
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200278548	A1	E	49	A61B-017/04	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW

AU 2002244830 A1 A61B-017/04 Based on patent WO 200278548

Surgical tool for introducing surgical **implant into human body for** treating **female urinary** incontinence , **comprises elongate shaft and implant carrier member**

Abstract (Basic):
... A surgical **tool** comprises an **elongate** shaft (4) and implant carrier member. The shaft has a **handle** (2) at a proximal end for manipulating the shaft and a distal end for penetrating...
... An INDEPENDENT CLAIM is also included for a method of treating female urinary **incontinence** comprising placing one end of the implant into a first carrier member such that the implant is radially confined by the carrier member. The first **tool** comprising an **elongate** shaft and carrier member is inserted through an incision in the anterior **vaginal** wall, past one side of the urethra and behind the pubic bone. The implant is...

...the second end of the tap is radially confined by the carrier member. The second **tool** is inserted into the same **incision** where the first **tool** is inserted. The implant is released from the carrier member while withdrawing the second **tool** , and the **incision** is then closed ...

...For introducing a surgical implant into the human body for the treatment of female urinary **incontinence** .
...

...tissue during insertion. It does not require all of the insertion tool to follow the **tape** through the abdominal wall. It allows placement of

implant without the need to penetrate to...

... **Handle** (2

Technology Focus:

... · to provide access to a surgical implant within it. The implant securing member comprises plastics **strips** extending around a surgical implant. The shaft receives a soft tissue anchor on its distal end. The surgical implant includes **tape** that is resiliently flat, and an anchoring member which are the soft tissue anchor...

...cm long, and 2-6 (preferably 2-4) cm wide. The elongate shaft may be **curved** having an angle of 30degrees...

...Title Terms: **INCONTINENCE** ;

41/3,K/84 (Item 84 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014779334 **Image available**
WPI Acc No: 2002-600040/200264
Related WPI Acc No: 2002-600038; 2002-600039
XRPX Acc No: N02-475643

Surgical **instrument for the** treatment **of female** incontinence **has a** curved needle **, to insert a ribbon in a supporting loop at the connective tissue on both sides of the urethra without bladder damage, as a disposable instrument**

Patent Assignee: BACHMANN K (BACH-I); GAISELMANN T (GAIS-I); MARZUSCH K (MARZ-I); RIEK S (RIEK-I); WALWIENER D (WALW-I)
Inventor: BACHMANN K; GAISELMANN T; MARZUSCH K; RIEK S; WALWIENER D
Number of Countries: 101 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200265923	A1	20020829	WO 2002EP1427	A	20020212	200264	B
AU 2002233324	A1	20020904	AU 2002233324	A	20020212	200427	
EP 1411838	A1	20040428	EP 2002700223	A	20020212	200429	
			WO 2002EP1427	A	20020212		

German priority 17 Feb 2001

Priority Applications (No Type Date): DE 12001007520 A 20010217
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200265923	A1	G	33	A61B-017/06	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW

AU 2002233324	A1		A61B-017/06	Based on patent WO 200265923
EP 1411838	A1	G	A61B-017/06	Based on patent WO 200265923

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

Surgical **instrument for the** treatment **of female** incontinence **has a** curved needle **, to insert a ribbon in a supporting loop at the connective tissue on both sides...**

Abstract (Basic):

... The **surgical** instrument, for the **treatment** of female **incontinence** , has at least one **curved needle** (10) with a pointed tip (12) to take a ribbon (26) of a resorbable or non-resorbable thread material. The ribbon is attached to the **needle** by a release fitting. A **handle** (16) is in a release mounting at an end section (14) of the **needle** . The pointed **needle** tip is off-center at the inner side of the **needle curve** , ground with a sliding surface. The **needle** , of stainless steel, is disposable.

... The **needle** is for the insertion of a ribbon from the **vagina** on both sides of the urethra to the abdominal wall, forming a supporting loop for the connective tissue, in the treatment of female **incontinence** .

...

...The drawing shows a schematic view of the **surgical** instrument to **treat** female **incontinence** .

...

... **curved needle** (10...
...pointed **needle** tip (12...

...end section of the **needle** (14...

... **handle** (16
...Title Terms: **INCONTINENCE** ;

41/3,K/86 (Item 86 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014777580 **Image available**
WPI Acc No: 2002-598286/200264
XRPX Acc No: N02-474453
Surgical **instrument for** treating **female stress urinary** incontinence **, has articulating mechanical arm coupled to** handle **to align distal end of surgical** needle
Patent Assignee: HOEPFFNER J (HOEP-I); LANDGREBE S (LAND-I); LEHE J (LEHE-I); STORMBY J (STOR-I); ETHICON INC (ETHI)
Inventor: HOEPFFNER J; LANDGREBE S; LEHE J; STORMBY J
Number of Countries: 001 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20020068948	A1	20020606	US 2000200805	P	20000501	200264 B
			US 2001840614	A	20010423	
US 6596001	B2	20030722	US 2000200805	P	20000501	200354
			US 2001840614	A	20010423	

Priority Applications (No Type Date): US 2000200805 P 20000501; US 2001840614 A 20010423
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020068948	A1		22	A61B-017/08	Provisional application US 2000200805
US 6596001	B2			A61B-017/12	Provisional application US 2000200805

Surgical **instrument for** treating **female stress urinary** incontinence **, has articulating mechanical arm coupled to** handle **to align distal end of surgical** needle

Abstract (Basic):
... The surgical instrument has a surgical **needle** connected to a **handle** (21) and formed with a **curved** shaft portion. An articulating mechanical arm (11) is coupled to the **handle** to align the distal end of the surgical **needle** .
... a) the procedure in **treating** female urinary **incontinence** using the **surgical** instrument...

...b) and the surgical **kit** including the surgical instrument...

...For treating female stress urinary **incontinence** .
...

...Facilitates navigation of **needle** through abdomen cavity. Ensures easy attachment allowing surgeon to connect both **tape** ends to single **needle** to perform female urinary **incontinence** treatment procedure. Uses **tape** made of synthetic resin in combination with natural material to eliminate potential erosion issues. Provides visual feedback to surgeon as to approximate locate **needle** tip and exit point of **needle** through wall of abdomen...

...The figure shows the passage of a **mesh tape** through the abdomen to **treat** SUI using the **surgical** instrument...

... **Handle** (21
...Title Terms: **INCONTINENCE** ;

related to the application

41/3,K/88 (Item 88 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014763003 **Image available**
WPI Acc No: 2002-583707/200262
Related WPI Acc No: 2002-557883; 2002-557884; 2002-583706; 2002-590895; 2002-740916; 2003-687604; 2004-034746; 2004-068919; 2004-216088
XRPX Acc No: N02-462851

Kit **used during urological applications, particularly** incontinence **surgical procedures, comprises** implantable material **suitable, and two types of** needles **suitable for a** sling **procedure**

Patent Assignee: AMERICAN MEDICAL SYSTEMS INC (AMME-N); ANDERSON K A (ANDE-I); NEISZ J J (NEIS-I); ROCHELEAU G A (ROCH-I); SNITKIN E S (SNIT-I); STASKIN D R (STAS-I); WESTRUM J W (WEST-I); BOUCHIER M S (BOUC-I); LUND R E (LUND-I); MOORE T M (MOOR-I); MORNINGSTAR R L (MORN-I); VANDERSLOOT V R (VAND-I)

Inventor: ANDERSON K A; BOUCHIER M S; LUND R E; MOORE T M; MORNINGSTAR R L; NEISZ J J; ROCHELEAU G R; VANDERSLOOT V R; ROCHELEAU G A; SNITKIN E S; STASKIN D R; WESTRUM J W

Number of Countries: 097 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200258564	A2	20020801	WO 2001US49642	A	20011228	200262 B
US 20020099258	A1	20020725	US 2001263472	P	20010123	200262
			US 2001269829	P	20010220	
			US 2001281350	P	20010404	
			US 2001295068	P	20010601	
			US 2001306915	P	20010720	
			US 2001917443	A	20010727	
US 20020147382	A1	20021010	US 2001263472	P	20010123	200274
			US 2001269829	P	20010220	
			US 2001281350	P	20010404	
			US 2001295068	P	20010601	
			US 2001306915	P	20010720	
			US 2001917443	A	20010727	
			US 2001917562	A	20010727	
			US 20015837	A	20011109	
US 20030050530	A1	20030313	US 2001263472	P	20010123	200321
			US 2001269829	P	20010220	
			US 2001281350	P	20010404	
			US 2001295068	P	20010601	
			US 2001306915	P	20010720	
			US 2001917443	A	20010727	
			US 2001917562	A	20010727	
			US 20015837	A	20011109	
			US 2002280945	A	20021025	
~~EP 1353599~~	A2	20031022	EP 2001991458	A	20011228	200370
			WO 2001US49642	A	20011228	
US 20040068159	A1	20040408	US 2001263472	P	20010123	200426
			US 2001269829	P	20010220	
			US 2001281350	P	20010404	
			US 2001295068	P	20010601	
			US 2001306915	P	20010720	
			US 2001917443	A	20010727	
			US 2001917562	A	20010727	
			US 20015837	A	20011109	
			US 2002280945	A	20021025	
			US 2003675816	A	20030930	
AU 2002231182	A1	20020806	AU 2002231182	A	20011228	200427

Priority Applications (No Type Date): US 20015837 A 20011109; US 2001263472 P 20010123; US 2001269829 P 20010220; US 2001281350 P 20010404; US 2001295068 P 20010601; US 2001306915 P 20010720; US 2001917443 A 20010727 ; US 2001917562 A 20010727; US 2002280945 A 20021025; US 2003675816 A 20030930

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200258564	A2	E	89	A61B-017/04	
	Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW				
	Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW				
US 20020099258	A1			A61F-002/00	Provisional application US 2001263472 Provisional application US 2001269829 Provisional application US 2001281350 Provisional application US 2001295068 Provisional application US 2001306915
US 20020147382	A1			A61F-002/00	Provisional application US 2001263472 Provisional application US 2001269829 Provisional application US 2001281350 Provisional application US 2001295068 Provisional application US 2001306915 CIP of application US 2001917443 CIP of application US 2001917562
US 20030050530	A1			A61F-002/00	Provisional application US 2001263472 Provisional application US 2001269829 Provisional application US 2001281350 Provisional application US 2001295068 Provisional application US 2001306915 CIP of application US 2001917443 CIP of application US 2001917562 Cont of application US 20015837
EP 1353599	A2	E		A61B-017/04	Based on patent WO 200258564
	Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR				
US 20040068159	A1			A61F-002/00	Provisional application US 2001263472 Provisional application US 2001269829 Provisional application US 2001281350 Provisional application US 2001295068 Provisional application US 2001306915 CIP of application US 2001917443 CIP of application US 2001917562 Cont of application US 20015837 Cont of application US 2002280945 CIP of patent US 6612977 CIP of patent US 6652450
AU 2002231182	A1			A61B-017/04	Based on patent WO 200258564

Kit **used during urological applications, particularly** incontinence **surgical procedures, comprises** implantable material **suitable, and two types of** needles **suitable for a** sling **procedure**

Abstract (Basic):

... The **kit** (15) comprises an **implantable material** suitable for a **sling** procedure (46), one of a first type of **needles** (60) suitable for a **sling** procedure, and one of a second type of **needle**

Provisional application US 2001281350
Provisional application US 2001295068
Provisional application US 2001306915

Surgical **instrument, for** treating **urological disorder, comprises an elongate** arcuate needle **and a** handle **for implanting a** sling assembly

Abstract (Basic):

... The **instrument** comprises an **elongate arcuate needle** and a **handle** for implanting a **sling assembly** (46). The **needle** size and shape is adapted to withstand forces encountered during the implantation procedure. A **handle** repositioning means moves at least one of the **needle** end engagement surface and the **handle** engagement surface between engaged and released positions.

... For treating urinary **incontinence** .

...

...with minimal invasion producing minimal or no side effects. The instrument reduces complexity of a **sling** procedure, pain, operative risks, infections and post operative hospital stays...

...The drawing shows a perspective view of the **sling** delivery system...

... **Sling assembly** (46

...Title Terms: **ARCUATE** ;

...International Patent Class (Main): **A61F-002/00**

done B. the inventors

41/3,K/89 (Item 89 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014737180 **Image available**
WPI Acc No: 2002-557884/200259
Related WPI Acc No: 2002-557883; 2002-583706; 2002-583707; 2002-590895; 2002-740916; 2003-687604; 2004-034746; 2004-068919; 2004-216088
XRPX Acc No: N02-441551

Surgical **instrument, for** treating **urological disorder, comprises an elongate** arcuate needle **and a** handle **for implanting a** sling assembly

Patent Assignee: AMERICAN MEDICAL SYSTEMS INC (AMME-N); ANDERSON K A (ANDE-I); NEISZ J J (NEIS-I); ROCHELEAU G A (ROCH-I); STASKIN D R (STAS-I); WESTRUM J W (WEST-I)
Inventor: ANDERSON K A; NEISZ J J; ROCHELEAU G R; STASKIN D R; WESTRUM J W; ROCHELEAU G A
Number of Countries: 097 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200258565	A2	20020801	WO 2001US49582	A	20011228	200259 B
US 20020099259	A1	20020725	US 2001263472	P	20010123	200260
			US 2001269829	P	20010220	
			US 2001281350	P	20010404	
			US 2001295068	P	20010601	
			US 2001306915	P	20010720	
			US 2001917445	A	20010727	
EP 1353600	A2	20031022	EP 2001985084	A	20011228	200370
			WO 2001US49582	A	20011228	
AU 2002234068	A1	20020806	AU 2002234068	A	20011228	200427
US 6802807	B2	20041012	US 2001263472	P	20010123	200467
			US 2001269829	P	20010220	
			US 2001281350	P	20010404	
			US 2001295068	P	20010601	
			US 2001306915	P	20010720	
			US 2001917445	A	20010727	

Priority Applications (No Type Date): US 2001917445 A 20010727; US 2001263472 P 20010123; US 2001269829 P 20010220; US 2001281350 P 20010404 ; US 2001295068 P 20010601; US 2001306915 P 20010720
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200258565	A2	E	112	A61B-017/06	
					Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
					Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW
US 20020099259	A1			A61F-002/00	Provisional application US 2001263472
					Provisional application US 2001269829
					Provisional application US 2001281350
					Provisional application US 2001295068
					Provisional application US 2001306915
EP 1353600	A2	E		A61B-017/06	Based on patent WO 200258565
					Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
AU 2002234068	A1			A61B-017/06	Based on patent WO 200258565
US 6802807	B2			A61F-002/00	Provisional application US 2001263472
					Provisional application US 2001269829

(60A) suitable for a **sling** procedure, where the first type of **needle** is **different** than the second type of **needle** . The first type of **needle** is a **straight** **needle** and the second type of **needle** comprises a **needle** with a **curved** portion.

... For treating **incontinence** , for urological applications particularly **incontinence** surgical procedures...

...existing surgeon training and preferences to contribute to better surgical outcomes. Surgical procedures using the **kit** have the capacity to be shorter with concomitant advantages enjoyed by patients and the healthcare...

...The drawing is a top view of the surgical **kit** .

...

... **Kit** (15...

... **Sling** procedure (46...

...First and second types of **needles** (60, 60A

Title Terms: **KIT** ;

...International Patent Class (Main): **A61F-002/00**

...International Patent Class (Additional): **A61F-002/02** ...

... **A61F-013/00**

41/3,K/95 (Item 95 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014634112 **Image available**
WPI Acc No: 2002-454816/200248
XRAM Acc No: C02-129376
XRPX Acc No: N02-358664
Surgical **instrument for** treating **female urinary** incontinence **comprises** tape **and** curved needle **-like element**
Patent Assignee: ETHICON INC (ETHI)
Inventor: KAMMERER G W; ULMSTEN U
Number of Countries: 097 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200239890	A2	20020523	WO 2001US47416	A	20011108	200248	B
AU 200230695	A	20020527	AU 200230695	A	20011108	200261	
EP 1343418	A2	20030917	EP 2001990938	A	20011108	200362	
			WO 2001US47416	A	20011108		
KR 2003068153	A	20030819	KR 2003706742	A	20030519	200382	

Priority Applications (No Type Date): US 2000716546 A 20001120
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200239890	A2	E	14	A61B-000/00	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200230695	A		A61B-000/00	Based on patent WO 200239890
EP 1343418	A2	E	A61B-017/04	Based on patent WO 200239890

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

KR 2003068153	A		A61B-017/04

Surgical **instrument for** treating **female urinary** incontinence **comprises** tape **and** curved needle **-like element**

Abstract (Basic):
... A surgical instrument consists of a **tape** and a **curved needle** -like element. The **tape** is configured to be implanted into lower abdomen of a female and provides support to urethra. The **needle** -like element is attached to the **tape** and has proximal and distal ends. It is arranged to pass the **tape** from an access in the **vaginal** wall under pubic bone to the outside of abdominal wall.
... For treating female urinary **incontinence** (claimed...

... **Handle** (11...

... **Needle** -like element (21
Technology Focus:
... Preferred Components: The **needle** -like element (21) **tapers** towards the distal end. The distal end is pointed or **blunt** . The **tape** is coated with fibroblast-stimulating material and has perforation for the growth of fibroblasts. It...

...each other. A visible marking is provided at the longitudinal center of the sheath. The **tape** may comprise netting and may be permanently

41/3,K/96 (Item 96 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014633510 **Image available**
WPI Acc No: 2002-454214/200248
Related WPI Acc No: 2004-419493
XRPX Acc No: N02-358288

Surgical **device for** treating **urinary** incontinence , **has** curved needle , **dilator with its distal end coupled to proximal end of** needle , **and** sling **with its distal end coupled to proximal end of dilator**

Patent Assignee: SCIMED LIFE SYSTEMS INC (SCIM-N); GELLMAN B N (GELL-I)
Inventor: GELLMAN B N; GELLMAN B
Number of Countries: 098 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20020058959	A1	20020516	US 2000248808	P	20001115	200248	B
			US 2001992359	A	20011114		
WO 200239914	A1	20020523	WO 2001US44253	A	20011114	200248	
AU 200217880	A	20020527	AU 200217880	A	20011114	200261	
US 6689047	B2	20040210	US 2000248808	P	20001115	200413	
			US 2001992359	A	20011114		

Priority Applications (No Type Date): US 2000248808 P 20001115; US 2001992359 A 20011114
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020058959	A1		10	A61B-017/34	Provisional application US 2000248808
WO 200239914	A1	E		A61B-017/42	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200217880	A		A61B-017/42	Based on patent WO 200239914
US 6689047	B2		A61F-002/02	Provisional application US 2000248808

Surgical **device for** treating **urinary** incontinence , **has** curved needle , **dilator with its distal end coupled to proximal end of** needle , **and** sling **with its distal end coupled to proximal end of dilator**

Abstract (Basic):
... The surgical device (10) has a **curved needle** (20), a dilator (40) with its distal end coupled to the proximal end of the **needle** , and a **sling** (50) with its distal end coupled to the proximal end of the dilator.
... An INDEPENDENT CLAIM is also included for a method of treating urinary **incontinence** .
...

...For treating urinary **incontinence** , such as urinary **incontinence** in women resulting from intrinsic sphincter deficiency...

...Enables minimally invasive treatment of urinary **incontinence** which can be performed with other transvaginal procedures...

... **Curved needle** (20...

implanted to the body as a loop around urethra. The instrument also includes a shank (10) having a **handle** (11), and the **needle** -like element is attached to the shank.

...Title Terms: **INCONTINENCE** ;

... **Sling** (50
...Title Terms: **INCONTINENCE** ;
...International Patent Class (Main): **A61F-002/02**
...International Patent Class (Additional): **A61F-002/00**

41/3,K/145 (Item 145 from file: 350)
DIALOG(R)File 350:Derwent WPIX

010608643 **Image available**
WPI Acc No: 1996-105596/199611
XRPX Acc No: N96-088516
Instrument for gynaecological surgery **esp.** treatment **of** incontinence **and prolapse - has two** curved **arms joined by locking ratchet teeth, guide tube, and long** needle **with one or more holes, and holder fixed by screw device**
Patent Assignee: SADEK L (SADE-I)
Inventor: SADEK L
Number of Countries: 019 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9602197	A1	19960201	WO 95NO126	A	19950711	199611	B
NO 9402636	A	19960115	NO 942636	A	19940713	199611	

Priority Applications (No Type Date): NO 942636 A 19940713
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9602197	A1	E	11	A61B-017/42	
	Designated States (National): JP NO US				
	Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE				
NO 9402636	A			A61B-017/04	

Instrument for gynaecological surgery **esp.** treatment **of** incontinence **and prolapse...**

...**has two** curved **arms joined by locking ratchet teeth, guide tube, and long** needle **with one or more holes, and holder fixed by screw device**

...Abstract (Basic): The device consists of two **curved** arms (2,3) made of suitable material, held together by a movable joint (4) with...

...The **device** has a thin, **long needle** (8) made of suitable material which has a sharp edge in one end and one or more holes side by side in the **blunt** end, and a movable **needle** holder (10) pierced by a hole suited to the **needle** (8) where the **needle** (8) can be fastened by a screwing device when the **needle** holder is fitted onto the **needle** .

...Title Terms: **INCONTINENCE** ;

41/3,K/153 (Item 153 from file: 350)
DIALOG(R)File 350:Derwent WPIX

009642965 **Image available**
WPI Acc No: 1993-336514/199342
Related WPI Acc No: 1993-196662; 1998-361480; 1999-022998; 1999-022999; 1999-044106; 1999-478601; 2002-360727
XRPX Acc No: N93-260163
Surgical treatment **of stress urinary** incontinence **- has probe passage to avoid damage to bladder, anchor fixation of sutures to pubic bone and drill guide**
Patent Assignee: VESITEC INC (VESI-N); BOSTON SCI IRELAND LTD (BOST-N); VESICA MEDICAL INC (VESI-N); VESITEC MEDICAL INC (VESI-N); BOSTON SCI TECHNOLOGY INC (BOST-N)
Inventor: BENDEREV T V; LEGOME M J; NAVES N H; NAVES H H
Number of Countries: 044 Number of Patents: 025
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9319678	A2	19931014	WO 93US3202	A	19930405	199342	B
AU 9339741	A	19931108	AU 9339741	A	19930405	199408	
EP 633748	A1	19950118	EP 93909261	A	19930405	199507	
			WO 93US3202	A	19930405		
WO 9319678	A3	19931223				199514	
JP 7505322	W	19950615	JP 93517761	A	19930405	199532	
			WO 93US3202	A	19930405		
US 5439467	A	19950808	US 91801747	A	19911203	199537	
			US 92862847	A	19920403		
			US 9378730	A	19930617		
EP 734687	A2	19961002	EP 93909261	A	19930405	199644	
			EP 96110837	A	19930405		
EP 734687	A3	19961016	EP 93909261	A	19930405	199648	
			EP 96110837	A	19930405		
EP 740925	A1	19961106	EP 93909261	A	19930405	199649	
			EP 96110856	A	19930405		
JP 9248305	A	19970922	JP 93517761	A	19930405	199748	N
			JP 96211787	A	19930405		
JP 9248306	A	19970922	JP 93517761	A	19930405	199748	N
			JP 96211788	A	19930405		
EP 633748	B1	19980304	EP 93909261	A	19930405	199813	
			WO 93US3202	A	19930405		
			EP 96110837	A	19930405		
			EP 96110856	A	19930405		
DE 69317276	E	19980409	DE 617276	A	19930405	199820	
			EP 93909261	A	19930405		
			WO 93US3202	A	19930405		
US 5746763	A	19980505	US 91801747	A	19911203	199825	
			US 92862847	A	19920403		
			US 9378403	A	19930617		
			US 95390434	A	19950214		
US 5749884	A	19980512	US 91801747	A	19911203	199826	
			US 92862847	A	19920403		
			US 94345003	A	19941123		
US 5813408	A	19980929	US 91801747	A	19911203	199846	
			US 92862847	A	19920403		
			US 94345003	A	19941123		
			US 95528848	A	19950915		
EP 740925	B1	19990303	EP 93909261	A	19930405	199913	
			EP 96110856	A	19930405		
DE 69323779	E	19990408	DE 623779	A	19930405	199920	
			EP 96110856	A	19930405		

ES 2128811	T3	19990516	EP 96110856	A	19930405	199926
CA 2139550	C	19990803	CA 2139550	A	19930405	199951
			WO 93US3202	A	19930405	
US 6001104	A	19991214	US 91801747	A	19911203	200005
			US 92862847	A	19920403	
			US 94345003	A	19941123	
			US 97803060	A	19970220	
US 6056688	A	20000502	US 91801747	A	19911203	200029
			US 92862847	A	19920403	
			US 94345003	A	19941123	
			US 95519848	A	19950825	
			US 97939151	A	19970929	
US 6077216	A	20000620	US 91801747	A	19911203	200035
			US 92862847	A	19920403	
			US 94345003	A	19941123	
			US 95519848	A	19950825	
			US 97939151	A	19970929	
			US 98136854	A	19980819	
CA 2181673	C	20000613	CA 2181673	A	19930405	200042
JP 3192147	B2	20010723	JP 93517761	A	19930405	200143
			WO 93US3202	A	19930405	

Priority Applications (No Type Date): US 92862847 A 19920403; US 91801747 A 19911203; US 9378730 A 19930617; JP 96211787 A 19930405; JP 96211788 A 19930405; US 9378403 A 19930617; US 95390434 A 19950214; US 94345003 A 19941123; US 95528848 A 19950915; US 97803060 A 19970220; US 95519848 A 19950825; US 97939151 A 19970929; US 98136854 A 19980819

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9319678	A2	E	125	A61B-017/16	
Designated States (National): AT AU BB BG BR CA CH CZ DE DK ES FI GB HU JP KP KR KZ LK LU MG MN MW NL NO NZ PL PT RO RU SD SE SK UA VN					
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL OA PT SE					
AU 9339741	A			A61B-017/16	Based on patent WO 9319678
EP 633748	A1	E		A61B-017/16	Based on patent WO 9319678
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE					
JP 7505322	W			A61B-017/16	Based on patent WO 9319678
US 5439467	A		8	A61B-017/04	CIP of application US 91801747 Div ex application US 92862847
EP 734687	A2	E	71	A61B-017/42	Div ex application EP 93909261
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE					
EP 734687	A3				Div ex application EP 93909261
EP 740925	A1	E	72	A61B-017/04	Div ex application EP 93909261
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE					
JP 9248305	A		37	A61B-017/00	Div ex application JP 93517761
JP 9248306	A		37	A61B-017/00	Div ex application JP 93517761
EP 633748	B1	E	28	A61B-017/16	Related to application EP 96110837 Related to application EP 96110856 Related to patent EP 734687 Related to patent EP 740925 Based on patent WO 9319678
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE					
DE 69317276	E			A61B-017/16	Based on patent EP 633748 Based on patent WO 9319678
US 5746763	A		55	A61M-029/00	CIP of application US 91801747 Div ex application US 92862847

			Cont of application US 9378403
US 5749884	A	A61F-005/00	CIP of application US 91801747
			Cont of application US 92862847
US 5813408	A	A61B-019/10	CIP of application US 91801747
			Cont of application US 92862847
			Div ex application US 94345003
EP 740925	B1 E	A61B-017/04	Div ex application EP 93909261
			Div ex patent EP 633748
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE			
DE 69323779	E	A61B-017/04	Based on patent EP 740925
ES 2128811	T3	A61B-017/04	Based on patent EP 740925
CA 2139550	C E	A61B-017/16	Based on patent WO 9319678
US 6001104	A	A61B-017/00	CIP of application US 91801747
			Cont of application US 92862847
			Cont of application US 94345003
			Cont of patent US 5749884
US 6056688	A	A61F-002/02	CIP of application US 91801747
			Cont of application US 92862847
			Div ex application US 94345003
			Cont of application US 95519848
			Div ex patent US 5749884
US 6077216	A	A61F-002/00	CIP of application US 91801747
			Cont of application US 92862847
			Div ex application US 94345003
			Cont of application US 95519848
			Div ex application US 97939151
			Div ex patent US 5749884
CA 2181673	C E	A61B-017/04	
JP 3192147	B2 50	A61B-017/16	Previous Publ. patent JP 7505322
			Based on patent WO 9319678

Surgical treatment **of stress urinary** incontinence -

...Abstract (Basic): the support for the drill guide. The body is also long enough to allow the **needle** tips to be drawn into it to prevent accidental stabbings...

...Abstract (Equivalent): the support for the drill guide. The body is also long enough to allow the **needle** tips to be drawn into it to prevent accidental stabbings...

...Abstract (Equivalent): The suture passer of the type adapted for releasably retaining a suture, comprises a **handle** , and an elongate tubular probe guide extending in a distal direction from the **handle** . There is an elongated pointed probe axially movable disposed within the tubular probe guide to...

...Title Terms: **INCONTINENCE** ;

41/3,K/159 (Item 159 from file: 350)
DIALOG(R)File 350:Derwent WPIX

008433055 **Image available**
WPI Acc No: 1990-320055/199042
XRAM Acc No: C90-138536
XRPX Acc No: N90-245294

Male external urinary anti- incontinence **device - comprises two spaced** curved **cradles joined by an integral hinge and having** strap **for holding device folded**

Patent Assignee: DACOMED CORP (DACO-N)
Inventor: ERICKSON R A; TIMM G W
Number of Countries: 016 Number of Patents: 007
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9011063	A	19901004				199042 B
AU 9053409	A	19901022				199104
EP 465530	A	19920115	EP 90905284	A	19900319	199203
JP 4503764	W	19920709	JP 90505267	A	19900319	199234
			WO 90US1480	A	19900319	
US 5184629	A	19930209	US 89325599	A	19890320	199308
			US 91692818	A	19910425	
EP 465530	B1	19930505	EP 90905284	A	19900319	199318
			WO 90US1480	A	19900319	
DE 69001546	E	19930609	DE 601546	A	19900319	199324
			EP 90905284	A	19900319	
			WO 90US1480	A	19900319	

Priority Applications (No Type Date): US 89325599 A 19890320; US 91692818 A 19910425
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9011063	A				
Designated States (National): AU CA JP					
Designated States (Regional): AT BE CH DE DK ES FR GB IT LU NL SE					
EP 465530	A				
Designated States (Regional): DE FR GB IT SE					
JP 4503764	W		7	A61F-005/37	Based on patent WO 9011063
US 5184629	A		8	A61F-005/48	Cont of application US 89325599
EP 465530	B1	E	11	A61F-005/44	Based on patent WO 9011063
Designated States (Regional): DE FR GB IT SE					
DE 69001546	E			A61F-005/44	Based on patent EP 465530
					Based on patent WO 9011063

Male external urinary anti- incontinence **device...**
...**comprises two spaced** curved **cradles joined by an integral hinge and having** strap **for holding device folded**

...Abstract (Basic): Male anti- **incontinence** device for preventing involuntary urine leakage comprises dorsal and ventral **curved** cradle arm members (25) connected by integral hinges (32) so as to have a central...

...hinged about an axis perpendicular to the axial alignment of the cradle members. A strong **assembly** (24) releasably retains the cradle member in the folded state. The **strap** can be elastic **tape** with hook and loop fastenings. The device can be a top semi-rigid plastic layer...
...Abstract (Equivalent): An external male anti- **incontinence** device, comprising a) a cradle member (22) including a dorsal arm member (26)

having a **curvilinear** surface (25) and a ventral arm member (28) having a **curvilinear** surface (25), the dorsal and ventral arm members (26,28) being in axial alignment with...

...one another with the pressure pad (30) projecting into a cavity formed between the facing **curvilinear** surfaces (25) of the dorsal and ventral arm members (26,28); and b) **strap assembly** means (24) for releasably retaining the cradle member (22) in the folded state. (Dwg.1 ...

...Abstract (Equivalent): An external male anti- **incontinence** device comprises a cradle with a **curvilinear** dosal arm and a **curvilinear** ventral arm both in axial alignment with each other, and an aperture defined intermediate the...

...arms face each other with the pressure pad projecting into a cavity formed between the **curvilinear** surfaces. The pressure pads have a smaller surface area than the inner surface area of the ventral arm to block urine leakage through the urethra. A **strap assembly** releasably retains the folded cradle. ADVANTAGE - Provides improved comfort...

...Title Terms: **INCONTINENCE** ;

International Patent Class (Main): **A61F-005/37** ...

... **A61F-005/44** ...

... **A61F-005/48**

International Patent Class (Additional): **A61F-002/00**

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Set     Items   Description
S1     117549   INCONTINEN? OR ENURES? OR DYSURES? OR (LACK OR DYSFUNCTION?
              OR TROUBL? OR DISORDER?)(3N)(URIN? OR UROL? OR URETHR? OR MI-
              CTUR? OR MINGEN?)(3N)(CONTROL? OR EVACUAT? OR ELIMINAT? OR EX-
              CRET?)
S2    1396113   (SURG? OR CHIRURG? OR MEDIC?)(5N)(FIX OR FIXE? OR FIXING OR
              OVERHAUL? OR RECONSTRUCT? OR OPERAT? OR REPAIR? OR REPARAT? -
              OR TREAT? OR REBUIL?)
S3     105915   (SURG? OR CHIRURG? OR MEDIC?)(5N)(SUSPEN? OR MEND? OR RECT-
              IF? OR REMED? OR CORRECT? OR CURE? OR CURING? OR RESTOR?)
S4     184126   (SURG? OR CHIRURG? OR MEDIC?)(5N)(RECONSTIT? OR REHABIL? OR
              VAGINOPLAST? OR PARAVAGINOPLAST?)
S5    4820818   KIT OR KITS OR PACKAG? OR ASSEMBL? OR COLLECTION? OR EQUIP-
              MENT?
S6     309219   STYLET? OR NEEDL? OR TROCAR?
S7      31092   (SUTUR? OR DILAT? OR PUNCTUR? OR PERFORAT?)(5N)(INSTRUMENT?
              OR IMPLEMENT? OR TOOL? ? OR APPLIANC? OR UTENSIL? OR DEVIC?)
S8     116792   (INCIS? OR CUT OR CUTS OR CUTTING OR ELONGAT? OR LONG? OR -
              SLENDER? OR SLIM OR ATTENUAT? OR TAPER?)(5N)(INSTRUMENT? OR I-
              MPLEMENT? OR TOOL? ? OR APPLIANC? OR UTENSIL? OR DEVIC?)
S9    4188258   SLING? OR STRAP? OR STRIP? OR BAND? OR HAMMOCK? OR MESH? OR
              TAPE? OR TENSIONER? OR TENSIONING?
S10    827171   (IMPLANT? OR EMPLANT? OR INGRAFT? OR ENGRAFT? OR EMPLAC? OR
              IMPLAC? OR AFFIX?)(3N)(MATERIAL? OR SUBSTANC?) OR NETTING? OR
              RIBBON? OR STRAND?
S11     50546   (SHEATH? OR COVER? OR TUBE? OR SLEEV?)(3N)(SHARP? OR CUT OR
              CUTTING OR CUTS OR OUTER? OR EXTEN? OR RETRACT? OR LOCK? OR -
              SLID?)
S12    140323   BLUNT? OR DULL OR OBTUND?
S13   3156037   STRAIGHT? OR UNBENT? OR UNBOWED? OR LINEAR?
S14   1979946   CURV? OR ARCUAT? OR BENT? OR BOWED? OR ARCHED? OR CRESCEN?
S15     38512   (DETECT? OR SENS? OR TRANSDUC?)(3N)(HOLE? OR PERFORAT? OR -
              PUNCTUR? OR BLADDER? OR NEEDLE()STICK? OR INJUR?)
S16    791002   HANDL? OR HANDGRIP? OR GRIP? OR HILT?
S17  16125216   DIFFEREN? OR DISSIMILAR? OR DISIMILAR? OR UNLIKE? OR UNALI-
              KE OR "NOT"()ALIKE
S18    704348   ADAPTER? OR GUIDE? ?
S19    260922   VAGIN? OR SUPRAPUB?
S20   3337187   PROCEDUR?
S21  17620981   METHOD? ?
S22      5478   S1 AND S5:S8
S23      1118   S22 AND S2:S4
S24      5478   S22:S23
S25      3333   S24 AND S20:S21
S26      5478   S24:S25
S27      1243   S26 AND S9:S10
S28        27   S27 AND S6:S8 AND S11:S14
S29       282   S27 AND S6:S8 AND S15:S19
S30      1243   S27 OR S29
S31        15   S30 AND (S6:S8 OR S16)(10N)S17
S32        42   S28 OR S31
S33        28   S32 AND PY<2002
S34        20   RD (unique items)
? show files
File   2:INSPEC 1969-2004/Oct W3
         (c) 2004 Institution of Electrical Engineers
File   5:Biosis Previews(R) 1969-2004/Oct W4
         (c) 2004 BIOSIS
File   6:NTIS 1964-2004/Oct W3
         (c) 2004 NTIS, Intl Cpyrght All Rights Res
File   8:Ei Compendex(R) 1970-2004/Oct W3
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NON PAT LIT

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File 95:TEME-Technology & Management 1989-2004/Jun W1
(c) 2004 FIZ TECHNIK
File 99:Wilson Appl. Sci & Tech Abs 1983-2004/Sep
(c) 2004 The HW Wilson Co.
File 144:Pascal 1973-2004/Oct W3
(c) 2004 INIST/CNRS
File 155:MEDLINE(R) 1951-2004/Oct W4
(c) format only 2004 The Dialog Corp.
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
(c) 1998 Inst for Sci Info
File 481:DELPHES Eur Bus 95-2004/Oct W3
(c) 2004 ACFCI & Chambre CommInd Paris
File 583:Gale Group Globalbase(TM) 1986-2002/Dec 13
(c) 2002 The Gale Group
?

34/3,K/3 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0013294754 BIOSIS NO.: 200100466593
Surgical **instrument and** method **for** treating **female urinary** incontinence
AUTHOR: Lehe Jorn (Reprint); Chen Chao-Chen; Luscombe Brian H
AUTHOR ADDRESS: Hamburg, Germany**Germany
JOURNAL: Official Gazette of the United States Patent and Trademark Office Patents 1249 (2): Aug. 14, 2001 **2001**
MEDIUM: e-file
PATENT NUMBER: US 6273852 PATENT DATE GRANTED: August 14, 2001 20010814
PATENT CLASSIFICATION: 600-30 PATENT ASSIGNEE: Ethicon, Inc.
PATENT COUNTRY: USA
ISSN: 0098-1133
DOCUMENT TYPE: Patent
RECORD TYPE: Abstract
LANGUAGE: English

Surgical **instrument and** method **for** treating **female urinary** incontinence
2001

ABSTRACT: A is a **surgical** instrument and **method** for **treating** female urinary stress **incontinence** . The instrument includes a **curved** **needle** -like element defining in part a **curved** shaft having a distal end and a proximal end. The diameter of the **needle** decreases from the proximal end to the distal end, and the **needle** terminates in a **blunt** tip. A **tape** attaches to the **needle** for implanting into the lower abdomen of a female to provide support to the urethra. The **tape** may be made from synthetic and natural materials. The **needle** and **tape** may also be modified to allow the surgeon to attach and detach the **tape** during the **surgical** **operation** .
DESCRIPTORS:
MAJOR CONCEPTS: **Equipment** , Apparatus, Devices and Instrumentation...
DISEASES: female urinary **incontinence** --
METHODS & EQUIPMENT: female urinary **incontinence** surgical instrument...

...female urinary **incontinence** treatment **method** --...

...surgical **method** , therapeutic **method**

34/3,K/14 (Item 5 from file: 73)
DIALOG(R)File 73:EMBASE

00392202 EMBASE No: 1975164592
A modification of the nylon sling **operation for severe stress** incontinence
EIGENE MODIFIKATION DER NYLONSCHLINGENPLASTIK BEI SCHWEREN HARNINKONTINENZEN
Dolff J.J.C.; Lenz W.
Frauenklin., St Elisabeth Krankenh., Essen Germany
Geburtshilfe und Frauenheilkunde (GEBURTSHILFE FRAUENHEILKD.) 1974, 34/12 (1055-1059)
CODEN: GEFRA
DOCUMENT TYPE: Journal
LANGUAGE: GERMAN

A modification of the nylon sling **operation for severe stress** incontinence

A personal modification of the nylon **sling** operation is described for the treatment of severe, often recurrent, stress **incontinence** of urine. Whether a nylon **sling** operation or a fascial **sling** operation is performed is definitely determined during the operation by inspection of the fascial structures of the bladder neck. A 50 cm long, 1 cm wide nylon **band** is used. The **band** is inserted retropubically with a **dull curved needle** and tied in front of the anterior rectus fascia through a small transverse suprapubic incision. Of the 38 cases treated by this **method** for stress **incontinence** of the second and the third degree, 34 patients are continent. In 3 cases significant...
MEDICAL DESCRIPTORS:
*fascia; *gynecologic surgery; *stress **incontinence** ; *urine **incontinence** ; *urology
1974

```
Set      Items   Description
S1       29222   INCONTINEN? OR ENURES? OR DYSURES? OR (LACK OR DYSFUNCTION?
                 OR TROUBL? OR DISORDER?)(3N)(URIN? OR UROL? OR URETHR? OR MI-
                 CTUR? OR MINGEN?)(3N)(CONTROL? OR EVACUAT? OR ELIMINAT? OR EX-
                 CRET?)
S2      296229   (SURG? OR CHIRURG? OR MEDIC?)(5N)(FIX OR FIXE? OR FIXING OR
                 OVERHAUL? OR RECONSTRUCT? OR OPERAT? OR REPAIR? OR REPARAT? -
                 OR TREAT? OR REBUIL?)
S3       43285   (SURG? OR CHIRURG? OR MEDIC?)(5N)(SUSPEN? OR MEND? OR RECT-
                 IF? OR REMED? OR CORRECT? OR CURE? OR CURING? OR RESTOR?)
S4       20902   (SURG? OR CHIRURG? OR MEDIC?)(5N)(RECONSTIT? OR REHABIL? OR
                 VAGINOPLAST? OR PARAVAGINOPLAST?)
S5     8901951   KIT OR KITS OR PACKAG? OR ASSEMBL? OR COLLECTION? OR EQUIP-
                 MENT?
S6      147811   STYLET? OR NEEDL? OR TROCAR?
S7        4242   (SUTUR? OR DILAT? OR PUNCTUR? OR PERFORAT?)(5N)(INSTRUMENT?
                 OR IMPLEMENT? OR TOOL? ? OR APPLIANC? OR UTENSIL? OR DEVIC?)
S8      158058   (INCIS? OR CUT OR CUTS OR CUTTING OR ELONGAT? OR LONG? OR -
                 SLENDER? OR SLIM OR ATTENUAT? OR TAPER?)(5N)(INSTRUMENT? OR I-
                 MPLEMENT? OR TOOL? ? OR APPLIANC? OR UTENSIL? OR DEVIC?)
S9     1991375   SLING? OR STRAP? OR STRIP? OR BAND? OR HAMMOCK? OR MESH? OR
                 TAPE? OR TENSIONER? OR TENSIONING?
S10     209382   (IMPLANT? OR EMPLANT? OR INGRAFT? OR ENGRAFT? OR EMPLAC? OR
                 IMPLAC? OR AFFIX?)(3N)(MATERIAL? OR SUBSTANC?) OR NETTING? OR
                 RIBBON? OR STRAND?
S11      84806   (SHEATH? OR COVER? OR TUBE? OR SLEEV?)(3N)(SHARP? OR CUT OR
                 CUTTING OR CUTS OR OUTER? OR EXTEN? OR RETRACT? OR LOCK? OR -
                 SLID?)
S12     111080   BLUNT? OR DULL OR OBTUND?
S13     777386   STRAIGHT? OR UNBENT? OR UNBOWED? OR LINEAR?
S14     544978   CURV? OR ARCUAT? OR BENT? OR BOWED? OR ARCHED? OR CRESCEN?
S15       5945   (DETECT? OR SENS? OR TRANSDUC?)(3N)(HOLE? OR PERFORAT? OR -
                 PUNCTUR? OR BLADDER? OR NEEDLE()STICK? OR INJUR?)
S16    2263873   HANDL? OR HANDGRIP? OR GRIP? OR HILT?
S17    4830619   DIFFEREN? OR DISSIMILAR? OR DISIMILAR? OR UNLIKE? OR UNALI-
                 KE OR "NOT"()ALIKE
S18    1251386   ADAPTER? OR GUIDE? ?
S19      33865   VAGIN? OR SUPRAPUB?
S20    1799251   PROCEDUR?
S21    1615044   METHOD? ?
S22      10173   S1 AND S5:S8
S23       5034   S22 AND (S2:S4 OR S19:S21)
S24      10173   S22:S23
S25       2432   S24 AND S9:S10
S26         32   S25 AND S6:S8(10N)S11:S14
S27         26   S25 AND S6:S8(10N)S17
S28         19   S25 AND S16(10N)S17
S29         32   S25 AND S15
S30        102   S26:S29
S31         72   S30 AND PY<2002
S32         52   RD (unique items)
? show files
File   9:Business & Industry(R) Jul/1994-2004/Oct
         (c) 2004  The Gale Group
File  15:ABI/Inform(R) 1971-2004/Oct 28
         (c) 2004 ProQuest Info&Learning
File  16:Gale Group PROMT(R) 1990-2004/Oct 29
         (c) 2004 The Gale Group
File  43:Health News Daily - Subs 1990-2004/Oct 28
         (c) 2004 F-D-C reports Inc.
File  47:Gale Group Magazine DB(TM) 1959-2004/Oct 29
```

NON PAT LIT

FULL TEXT FILES

SELECTED EDITED HITS

(c) 2004 The Gale group
File 98:General Sci Abs/Full-Text 1984-2004/Sep
(c) 2004 The HW Wilson Co.
File 129:PHIND(Archival) 1980-2004/Oct W3
(c) 2004 PJB Publications, Ltd.
File 130:PHIND(Daily & Current) 2004/Oct 28
(c) 2004 PJB Publications,Ltd.
File 135:NewsRx Weekly Reports 1995-2004/Oct W4
(c) 2004 NewsRx
File 148:Gale Group Trade & Industry DB 1976-2004/Oct 15
(c)2004 The Gale Group
File 149:TGG Health&Wellness DB(SM) 1976-2004/Oct W2
(c) 2004 The Gale Group
File 160:Gale Group PROMT(R) 1972-1989
(c) 1999 The Gale Group
File 369:New Scientist 1994-2004/Oct W3
(c) 2004 Reed Business Information Ltd.
File 370:Science 1996-1999/Jul W3
(c) 1999 AAAS
File 441:ESPICOM Pharm&Med DEVICE NEWS 2004/Oct W4
(c) 2004 ESPICOM Bus.Intell.
File 444:New England Journal of Med. 1985-2004/Oct W4
(c) 2004 Mass. Med. Soc.
File 621:Gale Group New Prod.Annou.(R) 1985-2004/Oct 29
(c) 2004 The Gale Group
?

32/3,K/5 **(Item 2 from file: 16)**
DIALOG(R)File 16:Gale Group PROMT(R)

09100105 Supplier Number: 79353481 (USE FORMAT 7 FOR FULLTEXT)
Female sling **system designed for safer, simpler placement.**
Urology Times, v29, n10, p39
Oct, 2001
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 124

(USE FORMAT 7 FOR FULLTEXT)
Female sling **system designed for safer, simpler placement.**
TEXT:
Minneapolis--American Medical Systems has received FDA approval to market the AMS SPARC **Sling** System for female stress **incontinence** . The system's **suprapubic** approach is designed to provide a potentially safer and simpler option for **sling** placement, according to the company.

The technique employs thin, **curved** stainless steel **needles** advanced through two tiny incisions above the pubic bone to a **vaginal** incision below the urethra. A specially designed polypropylene **sling** , contained in a plastic passing sheath, is then passed through the **needle** tunnel. Following correct **sling** placement, the sheath is removed. The **sling** tension can be further adjusted to provide support to the urethra, and the **needles** are withdrawn and discarded.

For more information, call (800) 328-3881; www.visitAMS.com.

20011001

32/3,K/20 **(Item 1 from file: 129)**
DIALOG(R)File 129:PHIND(Archival)

00711148
Europe clears suprapubic **SPARC** sling :
Clinica 959 p22, May 29, 2001 (**20010529)**
STORY TYPE: B WORD COUNT: 130

Europe clears suprapubic **SPARC** sling :
..., **20010529)**

American Medical Systems has CE-marked for sale in Europe its **suprapubic** SPARC **sling** for treating female **incontinence** . The system provides a safer and simpler **method** for placing **slings** than current techniques, claims the Minneapolis, Minnesota firm. It involves advancing thin, **curved** stainless steel **needles** through two tiny incisions above the pubic bone, which reduces the risk of damaging the bowel and blood vessels near the bladder, to a **vaginal** incision below the urethra. A **sling** is then passed through the **needle** tunnel, placed correctly and adjusted to support the urethra. Passing the **needles** from above the pubic bone rather than below reduces the risk of damaging the bowel...

41/3,K/97 (Item 97 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014623507 **Image available**
WPI Acc No: 2002-444211/200247
XRPX Acc No: N02-349958

Surgical instrument for introducing support band **or strand into body to treat female urinary** incontinence

Patent Assignee: ETHICON INC (ETHI); KAMMERER G W (KAMM-I); LEHE J (LEHE-I)
Inventor: KAMMERER G W; LEHE J
Number of Countries: 098 Number of Patents: 007
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200232284	A2	20020425	WO 2001US30033	A	20010926	200247 B
AU 200193095	A	20020429	AU 200193095	A	20010926	200255
US 6605097	B1	20030812	US 2000691359	A	20001018	200355
EP 1335670	A2	20030820	EP 2001973525	A	20010926	200362
			WO 2001US30033	A	20010926	
KR 2003044018	A	20030602	KR 2003705469	A	20030418	200366
JP 2004511283	W	20040415	WO 2001US30033	A	20010926	200426
			JP 2002535527	A	20010926	
CN 1484514	A	20040324	CN 2001820359	A	20010926	200437

Priority Applications (No Type Date): US 2000691359 A 20001018
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200232284	A2	E	17	A61B-000/00	
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW				
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW					
AU 200193095	A			A61B-000/00	Based on patent WO 200232284
US 6605097	B1			A61B-017/04	
EP 1335670	A2	E		A61B-017/06	Based on patent WO 200232284
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
KR 2003044018	A			A61B-017/42	
JP 2004511283	W		28	A61B-017/02	Based on patent WO 200232284
CN 1484514	A			A61B-017/06	

Surgical instrument for introducing support band **or strand into body to treat female urinary** incontinence

Abstract (Basic):

... The **instrument** has a **long curved** shaft (14) with a distal end insertable into the body. The shaft has a lumen...

... either be swaged directly to the strand or be in the form of an long **needle** (16) with an eye to which the strand is removably attached...

...For treating female **incontinence** by implanting a support **band** .

...

... **Curved** shaft (14...

... **Needle** (16

...Title Terms: **BAND** ;

41/3,K/101 (Item 101 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014509431 **Image available**
WPI Acc No: 2002-330134/200236
Related WPI Acc No: 2004-034745
XRAM Acc No: C02-095539
XRPX Acc No: N02-259044

Surgical assembly **for** treating **urinary stress** incontinence **in women has sub-urethral supporting** tape **and protective sleeve attached to** needle

Patent Assignee: SOFRADIM PRODN (SOFR-N); SOFRADIM PRODN SA (SOFR-N)
Inventor: THERIN M
Number of Countries: 098 Number of Patents: 007
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200228312	A1	20020411	WO 2001FR3027	A	20011001	200236 B
FR 2814939	A1	20020412	FR 200012750	A	20001005	200236
AU 200195646	A	20020415	AU 200195646	A	20011001	200254
US 20030004395	A1	20030102	WO 2001FR3027	A	20011001	200305
			US 2002151982	A	20020522	
EP 1339347	A1	20030903	EP 2001976344	A	20011001	200365
			WO 2001FR3027	A	20011001	
US 6685629	B2	20040203	WO 2001FR3027	A	20011001	200413
			US 2002151982	A	20020522	
JP 2004510489	W	20040408	WO 2001FR3027	A	20011001	200425
			JP 2002531942	A	20011001	

Priority Applications (No Type Date): FR 200012750 A 20001005

5 OCT 2000 FRENCH PRIORITY

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200228312	A1	F	20	A61F-002/00	
FR 2814939	A1			A61F-002/02	
AU 200195646	A			A61F-002/00	Based on patent WO 200228312
US 20030004395	A1			A61F-002/00	CIP of application WO 2001FR3027
EP 1339347	A1	F		A61F-002/00	Based on patent WO 200228312
US 6685629	B2			A61F-002/00	CIP of application WO 2001FR3027
JP 2004510489	W		30	A61F-002/00	Based on patent WO 200228312

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

Surgical assembly **for** treating **urinary stress** incontinence **in women has sub-urethral supporting** tape **and protective sleeve attached to** needle

Abstract (Basic):

... The **assembly** comprises a composite **strip** (4) made up of a sub-urethral supporting **tape** (2) of a woven **mesh** fabric, attached to a skin-piercing **needle** (3), and a flat protective sleeve (5). The sleeve is in two sections (51, 52...

...a separating zone (6) with a joint (7) that can be cut, and the compositive **strip** has a connector (81) at each end for fitting to the eye (85) of the **needle** .

... Providing sub-urethral support to alleviate female **incontinence**

...

...The **assembly** is universal in nature and suitable for use in any situation...

...The drawing shows a plan view of the **assembly** .

...

...Supporting **tape** (2...

...Composite **strip** (4...

...Eye of **needle** (85

Technology Focus:

... The supporting **tape** is made from mono- or multi-filaments of a biocompatible synthetic material such as polypropylene...

...Title Terms: **ASSEMBLE** ;

41/3,K/102 (Item 102 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014484027 **Image available**
WPI Acc No: 2002-304730/200234
XRPX Acc No: N02-238432
Surgical apparatus has needles inserted into the abdomen with an attachment device and delivery sheaths
Patent Assignee: ETHICON INC (ETHI); BERGER Y (BERG-I)
Inventor: BERGER Y
Number of Countries: 098 Number of Patents: 007
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200226108	A2	20020404	WO 2001US29999	A	20010926	200234 B
US 20020091373	A1	20020711	US 2000235438	P	20000926	200248
			US 2001963355	A	20010926	
AU 200193085	A	20020408	AU 200193085	A	20010926	200252
EP 1333774	A2	20030813	EP 2001973515	A	20010926	200355
			WO 2001US29999	A	20010926	
KR 2003034211	A	20030501	KR 2003704300	A	20030325	200357
US 6638210	B2	20031028	US 2000235438	P	20000926	200372
			US 2001963355	A	20010926	
JP 2004509685	W	20040402	WO 2001US29999	A	20010926	200424
			JP 2002529941	A	20010926	

Priority Applications (No Type Date): US 2000235438 P 20000926; US 2001963355 A 20010926
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200226108	A2	E	36	A61B-000/00	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

US 20020091373	A1		A61B-017/00	Provisional application US 2000235438
AU 200193085	A		A61B-000/00	Based on patent WO 200226108
EP 1333774	A2	E	A61F-002/00	Based on patent WO 200226108

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

KR 2003034211	A		A61F-002/00	
US 6638210	B2		A61B-017/00	Provisional application US 2000235438
JP 2004509685	W	55	A61B-017/00	Based on patent WO 200226108

Surgical apparatus has needles inserted into the abdomen with an attachment device and delivery sheaths

Abstract (Basic):
... The surgical apparatus (10) comprises a pair of **curved** rigid delivery **needles** (12b) for inserting into the abdomen of a human female on either side of the black neck adjacent the urethra for defining a delivery path for a **tape** . An attachment device removably attaches the **needles** to one end of the **tape** introduced to the **vagina** , and a pair of delivery sheaths define passageway to receive one of the delivery **needles** , so allowing for it to be withdrawn from the abdomen and the conduct one end of the **tape** from the **vagina** .
... An INDEPENDENT CLAIM is also included for a method of treatment of stress urinary **incontinence** .

...

...Delivery **needles** . (12b
...Title Terms: **NEEDLE** ;
...International Patent Class (Main): **A61F-002/00**

41/3,K/108 (Item 108 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014292779 **Image available**
WPI Acc No: 2002-113481/200215
XRPX Acc No: N02-084548
Surgical **instrument for** treating **female urinary** incontinence , **comprises** blunt **tip disposed at** curved **distal end of shaft for** blunt **dissection of tissue**
Patent Assignee: SCIMED LIFE SYSTEMS INC & AL (SCIM-N); SCIMED LIFE SYSTEMS INC (SCIM-N); RIOUX R F (RIOU-I)
Inventor: RIOUX R; SYLVESTER R; RIOUX R F
Number of Countries: 097 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20010053916	A1	20011220	US 2000209234	P	20000605	200215	B
			US 2001874302	A	20010605		
WO 200193656	A2	20011213	WO 2001US18176	A	20010605	200215	
AU 200175257	A	20011217	AU 200175257	A	20010605	200225	
EP 1289429	A2	20030312	EP 2001941946	A	20010605	200320	
			WO 2001US18176	A	20010605		

Priority Applications (No Type Date): US 2000209234 P 20000605; US 2001874302 A 20010605
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20010053916	A1		12	A61B-017/10	Provisional application US 2000209234

WO 200193656 A2 E A61F-000/00
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
AU 200175257 A A61B-017/10 Based on patent WO 200193656
EP 1289429 A2 E A61B-017/04 Based on patent WO 200193656
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

Surgical **instrument for** treating **female urinary** incontinence , **comprises** blunt **tip disposed at** curved **distal end of shaft for** blunt **dissection of tissue**

Abstract (Basic):
... The instrument comprises a shaft (16) extending from a **handle** (14) and comprising a **curved** portion (24). A **blunt** tip (20) is disposed at a distal end (19) of the shaft for **blunt** dissection of tissue. A grasping mechanism (22) is located in the distal end of the ...
... movable between an open position, an intermediate position and a closed position, to introduce a **suture** or **sling** into the **instrument** , to retain the **suture** or **sling** in the **instrument** and to release a **suture** or **sling** from the **instrument** , respectively. An INDEPENDENT CLAIM is also included for device for deploying an implant within a...

...For treating female urinary **incontinence** .
...

...The **blunt** tip of the **curved** surgical **instrument** is constructed to transvaginally deliver **sutures** or **slings** to appropriate locations within the body, to treat **incontinence** , without a need for dissection using sharp instruments. Hence reduces damage to the pelvic cavity...

...The figure shows a **surgical** instrument for **treating** female urinary **incontinence** .

...

... **Handle** (14...

... **Blunt** tip (20...
... **Curved** portion (24
...Title Terms: **INCONTINENCE** ;
...International Patent Class (Main): **A61F-000/00**

41/3,K/121 (Item 121 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013720407 **Image available**
WPI Acc No: 2001-204637/200121
XRPX Acc No: N01-146203

Surgical **instrument e.g. for** treating **female urinary** incontinence , **has** arcuately curved **tubular shaft with cutting tip on one end, and** handle **on other end, the** handle **and shaft being of uniform cross section across their lengths**

Patent Assignee: KALADELFOS G (KALA-I); ETHICON INC (ETHI)
Inventor: KALADELFOS G
Number of Countries: 096 Number of Patents: 015
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
GB 2353220	A	20010221	GB 200025799	A	20001020	200121	B
EP 1093758	A1	20010425	EP 2000309289	A	20001020	200124	
WO 200130246	A1	20010503	WO 2000AU1298	A	20001020	200126	
AU 200066670	A	20010531	AU 200066670	A	20001020	200137	
AU 200111152	A	20010508	AU 200111152	A	20001020	200149	
GB 2353220	B	20010919	GB 200025799	A	20001020	200155	
AU 740071	B	20011025	AU 200066670	A	20001020	200173	
KR 2002050244	A	20020626	KR 2002705014	A	20020419	200282	
US 6494887	B1	20021217	US 2000692332	A	20001019	200307	
TW 483744	A	20020421	TW 2000122140	A	20001020	200314	
US 20030045892	A1	20030306	US 2000692332	A	20001019	200320	
			US 2002280630	A	20021026		
CN 1382029	A	20021127	CN 2000814705	A	20001020	200322	
JP 2003512123	W	20030402	WO 2000AU1298	A	20001020	200325	
			JP 2001532669	A	20001020		
BR 200015277	A	20030715	BR 200015277	A	20001020	200365	
			WO 2000AU1298	A	20001020		
AU 769283	B	20040122	AU 200111152	A	20001020	200412	

Priority Applications (No Type Date): AU 993621 A 19991022
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
GB 2353220	A		30	A61B-017/04	
EP 1093758	A1	E		A61B-017/04	
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
WO 200130246	A1	E		A61B-017/42	
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW					
AU 200066670	A			A61B-017/12	
AU 200111152	A			A61B-017/42	Based on patent WO 200130246
GB 2353220	B			A61B-017/04	
AU 740071	B			A61B-017/12	Previous Publ. patent AU 200066670
KR 2002050244	A			A61B-017/42	
US 6494887	B1			A61B-017/04	
TW 483744	A			A61B-017/42	
US 20030045892	A1			A61B-017/04	Div ex application US 2000692332 Div ex patent US 6494887
CN 1382029	A			A61B-017/42	
JP 2003512123	W		41	A61B-017/00	Based on patent WO 200130246
BR 200015277	A			A61B-017/42	Based on patent WO 200130246

AU 769283 B A61B-017/42 Previous Publ. patent AU 200111152
Based on patent WO 200130246

Surgical **instrument e.g. for** treating **female urinary** incontinence , **has** arcuately curved **tubular shaft with cutting tip on one end, and** handle **on other end, the** handle **and shaft being of uniform cross section across their lengths**

Abstract (Basic):

... The surgical **instrument** has an **elongate** shaft (70) defining an internal passage, the shaft having a cutting tip at one end and **handle** on the other. The shaft and **handle** have uniform cross section along their entire length for passage into and through a patient...

... instrument is used for placing a filamentary element around the female urethra, and comprises an **arcuately curved** tubular shaft with a cutting tip at one end and a **handle** at the other and a flexible threading element passing through the internal passage to draw ...

...into a patient, in obstetrics and gynecology, and especially for the treatment of female urinary **incontinence** due to damage of muscle tissue and ligaments...

... **handle** end (72

...Title Terms: **INCONTINENCE** ;

41/3,K/123 (Item 123 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013606928 **Image available**
WPI Acc No: 2001-091136/200110
Related WPI Acc No: 2001-041248; 2001-182412; 2003-041522; 2003-166705; 2003-617537; 2003-637067
XRAM Acc No: C01-026751

Surgical **instrument for** treating **female urinary** incontinence **comprises adjusting unit for** tape , **after implanting** tape **with** curved needle **-like element having distal and proximal end into lower abdomen**

Patent Assignee: ETHICON INC (ETHI)
Inventor: HOEPFFNER H; PRIEWE J; SUMP R; TANNHAUSER R A
Number of Countries: 092 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200074633	A2	20001214	WO 2000US15518	A	20000607	200110	B
AU 200054659	A	20001228	AU 200054659	A	20000607	200119	
KR 2002036954	A	20020517	KR 2001715867	A	20011210	200273	
JP 2004500152	W	20040108	WO 2000US15518	A	20000607	200410	
			JP 2001501170	A	20000607		
AU 769863	B	20040205	AU 200054659	A	20000607	200413	

Priority Applications (No Type Date): US 2000589242 A 20000607; US 99138231 P 19990609
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200074633	A2	E	48	A61K-000/00	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW

AU 200054659	A			Based on patent WO 200074633
KR 2002036954	A		A61B-017/42	
JP 2004500152	W	63	A61B-017/04	Based on patent WO 200074633
AU 769863	B		A61M-031/00	Previous Publ. patent AU 200054659 Based on patent WO 200074633

Surgical **instrument for** treating **female urinary** incontinence **comprises adjusting unit for** tape , **after implanting** tape **with** curved needle **-like element having distal and proximal end into lower abdomen**

Abstract (Basic):
... A **surgical** instrument for **treating** female urinary stress **incontinence** comprises a **tape** for implanting into the lower abdomen of a female to provide support to the urethra comprising adjusting unit for adjusting the **tape** after implantation. A **curved needle** -like (10) element defining in part a **curved** shaft (18) having a distal end (17) and proximal end (19). An attaching unit (20) for attaching the **needle** to the **tape** .
... a) a method for treating female urinary **incontinence** ; and...

...For treating female urinary stress **incontinence** .
...

...The implanted **tape** can be continuously adjusted for supporting the anatomical structure by using the **tape** adjusting unit...

...The figure shows the expandable container associated with the **tape mesh** .

...

... **Needle** (10

...Title Terms: **INCONTINENCE** ;

International Patent Class (Additional): **A61F-005/00**

32/3,K/21 **(Item 2 from file: 129)**
DIALOG(R)File 129:PHIND(Archival)

00706186
SPARC system promises safer and easier sling **placement**
Clinica 954 p23, April 23, 2001 (**20010423)**
STORY TYPE: F WORD COUNT: 193

SPARC system promises safer and easier sling **placement**
..., **20010423)**

...Systems (AMS) says that it is in the final development stages of a minimally-invasive **sling** system for treating female **incontinence** . The SPARC system could provide doctors with a safer and simpler **method** for placing **slings** than current techniques, claims the Minneapolis, Minnesota, company.

The system, which uses a **suprapubic** approach, involves advancing thin, **curved** stainless steel **needles** through two tiny incisions above the pubic bone to a **vaginal** incision below the urethra. A **sling** , specially designed by AMS, is then transferred through the **needle** tunnel, placed correctly and adjusted to provide support to the urethra. Most patients should be able to return home on the day of the **procedure** , says the company. It adds that by passing the thin **needles** from above the pubic bone, the risk of perforating the bowel or damaging blood vessels near the bladder will be substantially less than that using a **vaginal** approach.

AMS says that, pending CE-mark approval, it expects to launch the product in...

32/3,K/23 (Item 1 from file: 135)
DIALOG(R)File 135:NewsRx Weekly Reports

0000052163 (USE FORMAT 7 OR 9 FOR FULLTEXT)
FDA Clears New Sling **System As Treatment Option In Women**
Medical Devices & Surgical Technology Week, September 16, 2001, p.22-23

DOCUMENT TYPE: Expanded Reporting LANGUAGE: English
RECORD TYPE: FULLTEXT
WORD COUNT: 463

FDA Clears New Sling **System As Treatment Option In Women**

...TEXT: AMS) announced that the U.S. Food and Drug Administration has cleared the AMS SPARC **Sling** System for commercial marketing in the United States. The system is designed to offer a superior surgical approach to placing a **sling** for the treatment of female stress **incontinence** .

Sling procedures , which support the urethra, currently represent more than 40% of the total number of surgical **procedures** for **incontinence** .

... designed to provide a new, potentially safer and simpler option for the placement of a **sling** ," said Doug Kohrs, AMS. "The SPARC system joins a rapidly growing AMS product line and will provide another innovative option for the treatment of female **incontinence** ."

David Staskin, MD, of Harvard Medical School, Boston, Massachusetts, noted that the system and its **suprapubic** approach provide unique advantages. "We believe that with passing of the thin **needles** from above the pubic bone, rather than below, the risk of perforating the bowel or damaging blood vessels near the bladder will be substantially less than with a **vaginal** approach. Using the pubic bones as an anatomical guide will allow surgeons to stay within...

...to return home the same day," Staskin added. "Surgeons already skilled in the transvaginal or **suprapubic** approaches or those interested in alternative **procedures** will want to explore this new technique."

The SPARC system technique employs thin, **curved** stainless steel **needles** advanced through two tiny incisions above the pubic bone to a **vaginal** incision below the urethra. A specially designed polypropylene **sling** , contained in a plastic passing sheath, is then passed through the **needle** tunnel. Following correct **sling** placement, the sheath is removed. The **sling** tension can be further adjusted to provide support to the urethra and the **needles** are withdrawn and discarded.

Stress **incontinence** , the involuntary loss of urine while coughing, sneezing, laughing, lifting, or exercise, is the most common type of urinary **incontinence** . Worldwide, 23 million people suffer from stress or mixed **incontinence** . Of those, 10 million are women in the U.S. Most are women and common causes are a weakening of pelvic floor tissue during pregnancy and childbirth.

The **sling procedure** is becoming the leading technique for treating stress **incontinence** in women. This outpatient treatment is suitable for a wide variety of patients and can be performed using a minimally invasive approach. In a **sling procedure** , human or synthetic material is placed beneath the urethra through small incisions and fixated to...
SUBJECT HEADING: Urinary **Incontinence**

2001

```
Set     Items   Description
S1      18310   INCONTINEN? OR ENURES? OR DYSURES? OR (LACK OR DYSFUNCTION?
             OR TROUBL? OR DISORDER?)(3N)(URIN? OR UROL? OR URETHR? OR MI-
             CTUR? OR MINGEN?)(3N)(CONTROL? OR EVACUAT? OR ELIMINAT? OR EX-
             CRET?)
S2      76669   (SURG? OR CHIRURG? OR MEDIC?)(5N)(FIX OR FIXE? OR FIXING OR
             OVERHAUL? OR RECONSTRUCT? OR OPERAT? OR REPAIR? OR REPARAT? -
             OR TREAT? OR REBUIL?)
S3       8931   (SURG? OR CHIRURG? OR MEDIC?)(5N)(SUSPEN? OR MEND? OR RECT-
             IF? OR REMED? OR CORRECT? OR CURE? OR CURING? OR RESTOR?)
S4        813   (SURG? OR CHIRURG? OR MEDIC?)(5N)(RECONSTIT? OR REHABIL? OR
             VAGINOPLAST? OR PARAVAGINOPLAST?)
S5      822021   KIT OR KITS OR PACKAG? OR ASSEMBL? OR COLLECTION? OR EQUIP-
             MENT?
S6      101340   STYLET? OR NEEDL? OR TROCAR?
S7        9527   (SUTUR? OR DILAT? OR PUNCTUR? OR PERFORAT?)(5N)(INSTRUMENT?
             OR IMPLEMENT? OR TOOL? ? OR APPLIANC? OR UTENSIL? OR DEVIC?)
S8       94322   (INCIS? OR CUT OR CUTS OR CUTTING OR ELONGAT? OR LONG? OR -
             SLENDER? OR SLIM OR ATTENUAT? OR TAPER?)(5N)(INSTRUMENT? OR I-
             MPLEMENT? OR TOOL? ? OR APPLIANC? OR UTENSIL? OR DEVIC?)
S9      641978   SLING? OR STRAP? OR STRIP? OR BAND? OR HAMMOCK? OR MESH? OR
             TAPE? OR TENSIONER? OR TENSIONING?
S10     123093   (IMPLANT? OR EMPLANT? OR INGRAFT? OR ENGRAFT? OR EMPLAC? OR
             IMPLAC? OR AFFIX?)(3N)(MATERIAL? OR SUBSTANC?) OR NETTING? OR
             RIBBON? OR STRAND?
S11     118626   (SHEATH? OR COVER? OR TUBE? OR SLEEV?)(3N)(SHARP? OR CUT OR
             CUTTING OR CUTS OR OUTER? OR EXTEN? OR RETRACT? OR LOCK?)
S12      30311   BLUNT? OR DULL OR OBTUND?
S13     533591   STRAIGHT? OR UNBENT? OR UNBOWED? OR LINEAR?
S14     408012   CURV? OR ARCUAT? OR BENT? OR BOWED? OR ARCHED? OR CRESCEN?
S15       6004   (DETECT? OR SENS? OR TRANSDUC?)(3N)(HOLE? OR PERFORAT? OR -
             PUNCTUR? OR BLADDER?)
S16     382947   HANDL? OR HANDGRIP? OR GRIP? OR HILT?
S17    1147673   DIFFEREN? OR DISSIMILAR? OR DISIMILAR? OR UNLIKE? OR UNALI-
             KE OR "NOT"()ALIKE
S18     346554   ADAPTER? OR GUIDE? ?
S19      21862   VAGIN? OR SUPRAPUB?
S20     472463   PROCEDUR?
S21    1382857   METHOD? ?
S22    1068944   PROCESS??
S23    1154354   SYSTEM?
S24     608127   TECHNIQU?
S25      38168   IC=A61F?
S26       3340   S1 AND S2:S4
S27      10139   (S1 OR S26) AND S5:S8
S28      11228   S26:S27
S29       7939   S28 AND S9:S10
S30        239   S29 AND S6:S8(5N)S11:S14
S31         11   S30 AND S15
S32         43   S30 AND (S16 OR S6:S8)(5N)S17
S33        102   S30 AND S11
S34        149   S30 AND S18
S35        100   S30 AND S20:S24(5N)S2:S4
S36         76   S30 AND S25
S37        114   S30 AND S19
S38        201   S31:S37
S39        239   S30 OR S38
S40        239   IDPAT (sorted in duplicate/non-duplicate order)
? show files
File 348:EUROPEAN PATENTS 1978-2004/Oct W03
        (c) 2004 European Patent Office
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Pat Lit

Full Text Files

Selected Edited Hits

File 349:PCT FULLTEXT 1979-2002/UB=20041021,UT=20041014
(c) 2004 WIPO/Univentio
?

40/3,K/13 (Item 13 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

01361763
Surgical **instrument for** treating **female urinary** incontinence
Chirurgisches Instrument zur Behandlung von Urin Inkontinenz bei Frauen
Instrument chirurgical pour le traitement de l'incontinance urinaire femine
PATENT ASSIGNEE:
ETHICON, INC., (2057903), PO Box 151, Somerville, New Jersey 08876-0151, (US), (Applicant designated States: all)
INVENTOR:
Ulmsten, Ulf, Ridvagen 18 D, 18235 Danderyd, (SE)
LEGAL REPRESENTATIVE:
Fisher, Adrian John et al (52611), CARPMAELS & RANSFORD 43 Bloomsbury Square, London WC1A 2RA, (GB)
PATENT (CC, No, Kind, Date): EP 1159921 A2 011205 (Basic)
EP 1159921 A3 020130
APPLICATION (CC, No, Date): EP 2001203181 961008;
PRIORITY (CC, No, Date): SE 9535129 951009
DESIGNATED STATES: DE; DK; ES; FI; ~~FR; GB;~~ IT; SE
RELATED PARENT NUMBER(S) - PN (AN):
EP 854691 (EP 96935678)
INTERNATIONAL PATENT CLASS: A61B-017/04; A61B-017/06; **A61F-002/00**
ABSTRACT WORD COUNT: 86
NOTE:
Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200149	406
SPEC A	(English)	200149	1226
Total word count - document A			1632
Total word count - document B			0
Total word count - documents A + B			1632

Surgical **instrument for** treating **female urinary** incontinence
...INTERNATIONAL PATENT CLASS: **A61F-002/00**

...ABSTRACT A2
A **surgical** instrument for **treating** female urinary **incontinence** comprises a shank (10) having a handle (11) at one end thereof, and two **curved needle** -like elements (21A, 21B) which can be connected one at the time with the shank...

...the shank and are attached at one end thereof each with one end of a **netting** (26) which is intended to be implanted into the body and is covered by a...

...SPECIFICATION A2
The invention relates to a **surgical** instrument for **treating** female urinary **incontinence** , of the type described in PCT/SE95/00964 the content of which is incorporated herein by reference, comprising a shank having a handle at one end thereof, and two **curved needle** -like elements which are each attached at one end thereof to one end of a **tape** to be implanted into the body, and are constructed to be connected one at the...

...thereof each element being intended to be passed into the body via the

=(US) 2002/0165566

Swedish priority = 9 OCT 1995

anterior (suburethral) **vaginal** wall and being dimensioned to extend from the inside surface of the **vaginal** wall over the back of the pubic bone to the outside of the abdominal wall...

...of the surgical instrument,

FIG. 3 is an exploded side view of one of the **needles** and **tape** and shrinkage hose to be connected with said **needle** ,

FIG. 4 is a side view of the **needle** in FIG. 3 with the **tape** connected therewith,

FIG. 5 is an enlarged fragmentary axial cross sectional view of a coupling of the instrument for connecting an exchangeable **needle** thereof, and

FIG 6 is a side view of two **needles** and a **tape** interconnecting said **needles** .

In the following description the same reference numerals have been used as in PCT/SE85...

...19 of further reduced diameter joining the threaded portion 18, end portion 19 forming a **guide** pin at said other end of the shaft. Portions 18 and 19 are received in...

...said end portion is non-circular.

The surgical instrument also includes an exchangeable and disposable **needle** 21 which at one end thereof is attached to the shank at one end of the **needle** and extends over substantially a quarter of a circle to the other, free end thereof in order to follow substantially the profile of the pubis between the **vagina** and the abdominal wall. The **needle** has uniform circular cross section and has a smooth, preferably polished outside surface. At the free end thereof the **needle** forms a point 22 by being terminated by a conical portion.

For attachment of **needle** 21 to shank 10 the **needle** forms at said one end thereof a straight portion 30 which is cylindrical but has...

...31 over that part of said portion 30, extending from the adjacent end of the **needle** , which shall be received by socket portion 14'. The **needle** should be oriented in a predetermined rotational position in relation to the shank, and more...

CLAIMS A2

1. **Surgical** instrument for **treating** female urinary **incontinence** , comprising a shank (10) having a handle (11) at one end thereof, and two **curved** **needle** -like elements (21) which are each attached at one end thereof to one end of a **tape** (26) to be implanted into the body, and are constructed to be connected one at...

...thereof each element being intended to be passed into the body via the anterior (suburethral) **vaginal** wall and being dimensioned to extend from the inside surface of the **vaginal** wall over the back of the pubic bone to the outside of the abdominal wall, characterized in that the **tape** comprises a **netting** (26) enclosed by a thin plastic sheath (34).

2. Instrument as in claim 1 characterized in that the **netting** (26) is made of polypropylene.

3. Instrument as in claim 2 characterized in that the...

...of claims 1 to 3 characterized in that the sheath (34) is perforated at the **longitudinal** center thereof.

5. **Instrument** as in any of claims 1 to 4 characterized in that the **netting** (26) and the sheath are interconnected by stitching ((35).

6. Instrument as in any of claims 1 to 5 characterized in that the **needle** -like element (21) comprises a non-circular end portion fitting into a non-circular socket...

...10).

7. Instrument as in claim 6 chararacterized in that said end portion of the **needle** -like element (21) joins the rest of the element by a conical portion (32) **tapering** towards a shoulder (33) on the **needle** -like element.

8. Instrument as in claim 7 characterized in that the **netting** (26) and the sheath (34) are connected to the **needle** -like element (21) by gluing to said conical portion (32).

9. Instrument as in claim 8 characterized in that the **netting** (26) and the sheath (34) at the site of attachement thereof are covered by a ...

...hose (36) abuts the shoulder (33) and is substantially flush with the surface of the **needle** -like element at said shoulder.

11. Instrument as in claim 9 or 11, characterized in that the **netting** (26) and the sheath (34) project from the shrink hose (36) at the other end...

40/3,K/14 **(Item 14 from file: 348)**
DIALOG(R)File 348:EUROPEAN PATENTS

01349508
Surgical tape **for** treating **female urinary** incontinence
Chirurgisches Band **zur Behandlung von Harn-Inkontinenz bei Frauen**
Bandelette chirurgicale pour le traitement de l' incontinence **urinaire feminine**

PATENT ASSIGNEE:
ETHICON, INC., (2057903), PO Box 151, Somerville, New Jersey 08876-0151, (US), (Proprietor designated states: all)
INVENTOR:
Ulmsten, Ulf, Ridvagen 18 D, 18235 Danderyd, (SE)
LEGAL REPRESENTATIVE:
Fisher, Adrian John et al (52611), CARPMAELS & RANSFORD 43 Bloomsbury Square, London WC1A 2RA, (GB)

PATENT (CC, No, Kind, Date): EP 1151722 A2 011107 (Basic)
EP 1151722 A3 020130
EP 1151722 B1 040804
APPLICATION (CC, No, Date): EP 2001203180 961008;
PRIORITY (CC, No, Date): SE 953512 951009
DESIGNATED STATES: DE; DK; ES; FI; FR; GB; IT; SE
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
RELATED PARENT NUMBER(S) - PN (AN):
EP 854691 (EP 96935678)
INTERNATIONAL PATENT CLASS: A61B-017/04; A61B-017/06; **A61F-002/00**
ABSTRACT WORD COUNT: 86
NOTE:
Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200145	406
CLAIMS B	(English)	200432	527
CLAIMS B	(German)	200432	534
CLAIMS B	(French)	200432	569
SPEC A	(English)	200145	1226
SPEC B	(English)	200432	1210
Total word count - document A			1632
Total word count - document B			2840
Total word count - documents A + B			4472

Surgical tape **for** treating **female urinary** incontinence
Chirurgisches Band **zur Behandlung von Harn-Inkontinenz bei Frauen**
Bandelette chirurgicale pour le traitement de l' incontinence **urinaire feminine**
...INTERNATIONAL PATENT CLASS: **A61F-002/00**

...ABSTRACT A2
A **surgical** instrument for **treating** female urinary **incontinence** comprises a shank (10) having a handle (11) at one end thereof, and two **curved needle** -like elements (21A, 21B) which can be connected one at the time with the shank...

...the shank and are attached at one end thereof each with one end of a **netting** (26) which is intended to be implanted into the body and is covered by a...

...SPECIFICATION A2

The invention relates to a **surgical** instrument for **treating** female urinary **incontinence** , of the type described in PCT/SE95/00964 the content of which is incorporated herein by reference, comprising a shank having a handle at one end thereof, and two **curved** **needle** -like elements which are each attached at one end thereof to one end of a **tape** to be implanted into the body, and are constructed to be connected one at the...

...thereof each element being intended to be passed into the body via the anterior (suburethral) **vaginal** wall and being dimensioned to extend from the inside surface of the **vaginal** wall over the back of the pubic bone to the outside of the abdominal wall...

...of the surgical instrument,

FIG. 3 is an exploded side view of one of the **needles** and **tape** and shrinkage hose to be connected with said **needle** ,

FIG. 4 is a side view of the **needle** in FIG. 3 with the **tape** connected therewith,

FIG. 5 is an enlarged fragmentary axial cross sectional view of a coupling of the instrument for connecting an exchangeable **needle** thereof, and

FIG 6 is a side view of two **needles** and a **tape** interconnecting said **needles** .

In the following description the same reference numerals have been used as in PCT/SE85...

CLAIMS A2

1. **Surgical** instrument for **treating** female urinary **incontinence** , comprising a shank (10) having a handle (11) at one end thereof, and two **curved** **needle** -like elements (21) which are each attached at one end thereof to one end of a **tape** (26) to be implanted into the body, and are constructed to be connected one at...

...thereof each element being intended to be passed into the body via the anterior (suburethral) **vaginal** wall and being dimensioned to extend from the inside surface of the **vaginal** wall over the back of the pubic bone to the outside of the abdominal wall, characterized in that the **tape** comprises a **netting** (26) enclosed by a thin plastic sheath (34).

2. Instrument as in claim 1 characterized in that the **netting** (26) is made of polypropylene.
3. Instrument as in claim 2 characterized in that the...

...of claims 1 to 3 characterized in that the sheath (34) is perforated at the **longitudinal** center thereof.

5. **Instrument** as in any of claims 1 to 4 characterized in that the **netting** (26) and the sheath are interconnected by stitching ((35).
6. Instrument as in any of claims 1 to 5 charactarized in that the **needle** -like element (21) comprises a non-circular end portion fitting into a non-circular socket...

...10).

7. Instrument as in claim 6 chararacterized in that said end portion of the **needle** -like element (21) joins the rest of the element by a conical portion (32) **tapering** towards a shoulder (33) on the **needle** -like element.
8. Instrument as in claim 7 characterized in that the **netting** (26) and the sheath (34) are connected to the **needle** -like element (21) by gluing to said conical portion (32).
9. Instrument as in claim 8 characterized in that the **netting** (26) and the sheath (34) at the site of attachement thereof are covered by a ...

...hose (36) abuts the shoulder (33) and is substantially flush with the surface of the **needle** -like element at said shoulder.

11. Instrument as in claim 9 or 11, characterized in that the **netting** (26) and the sheath (34) project from the shrink hose (36) at the other end...

...CLAIMS B1

1. A **tape** for treating female urinary **incontinence** characterised in that the **tape** comprises a **netting** (26) enclosed by a thin plastics sheath (34).
2. The **tape** of claim 1 characterised in that the **netting** (26) is made of polypropylene.
3. The **tape** of claim 1 characterised in that the **netting** (34) is made of polyethylene.
4. The **tape** of any of claims 1-3 characterised in that the sheath (34) is perforated at the longitudinal centre thereof.
5. The **tape** of any of claims 1-4 characterised in that the **netting** (26) and the sheath are interconnected by stitching (35).
6. The **tape** of any of claims 1-5 having a first end attachable to a first **curved** **needle** -like element (21A) at one end of the first element and a second end of the **tape** (26) attachable to a second **curved** **needle** -like element (21B) at one end of the second element, the elements being intended to be passed into the body via the **vaginal** wall and being dimensioned to extend from the inside surface

of the **vaginal** wall over the back of the pubic bone to the outside of the abdominal wall.

7. The **tape** of any of claims 1-6 comprising a first **curved needle** -like element (21A) attached at one end of the first element to a first end of the **tape** (26) and a second **curved needle** -like element (21B) attached at one end of the second element to a second end of the **tape** (26), the elements being constructed to be connectable independently of each other with the second...

...a first end of the shank and a second end adapted to receive the first **curved needle** -like element (21A) or the second **curved needle** like element (21 B), and the elements being intended to be passed into the body via the **vaginal** wall and being dimensioned to extend from the inside surface of the **vaginal** wall over the back of the pubic bone to the outside of the abdominal wall.

8. The **tape** of claim 7 characterised in that the **needle** -like element comprises a non-circular end portion fitting into a non-circular socket (14') at the second end of the shank (10).
9. The **tape** of claim 8 characterised in that the end portion of the **needle** -like element (21) joins the rest of the element by a conical portion (32) **tapering** towards a shoulder (33) on the **needle** -like element.
10. The **tape** of claim 9 characterised in that the **netting** (26) and the sheath (34) are connected to the **needle** -like element (21) by gluing to the conical portion (32).
11. The **tape** of claim 10 characterised in that the **netting** (26) and the sheath (34) at the site of attachment thereof are covered by a shrink hose (36).
12. The **tape** of claim 11 characterised in that one end of the shrink hose (36) abuts the shoulder (33) and is substantially flush with the surface of the **needle** -like element at the shoulder.
13. The **tape** of claim 11 or 12 characterised in that the **netting** (26) and the sheath (34) project from the shrink hose (36) at the other end thereof.
14. The **tape** of any of claims 1 to 13 characterised in that a visible marking (38) is...

40/3,K/16 (Item 16 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00372723 **Image available**
SURGICAL **INSTRUMENT FOR** TREATING **FEMALE URINARY** INCONTINENCE
INSTRUMENT CHIRURGICAL DE TRAITEMENT DE L' INCONTINENCE **URINAIRE CHEZ LA FEMME**

Patent Applicant/Assignee:
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ULMSTEN Ulf,
Inventor(s):
ULMSTEN Ulf,

Patent and Priority Information (Country, Number, Date):
Patent: WO 9713465 A1 19970417
Application: WO 96SE1269 19961008 (PCT/WO SE9601269)
Priority Application: SE 953512 19951009
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AU CA CN JP US AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE
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SURGICAL **INSTRUMENT FOR** TREATING **FEMALE URINARY** INCONTINENCE
INSTRUMENT CHIRURGICAL DE TRAITEMENT DE L' INCONTINENCE **URINAIRE CHEZ LA FEMME**

Fulltext Availability:
Detailed Description
Claims

English Abstract
A **surgical** instrument for **treating** female urinary **incontinence** comprises a shank (10) having a handle (11) at one end thereof, and two **curved needle** -like elements (21A, 21B) which can be connected one at the time with the shank...

...the shank and are attached at one end thereof each with one end of a **netting** (26) which is intended to be implanted into the body and is covered by a...

French Abstract
L'invention porte sur un instrument chirurgical permettant de traiter l' **incontinence** urinaire chez la femme comportant une tige (10) munie d'une poignee (11) placee a...

Detailed Description
Surgical instrument for **treating** female urinary **incontinence**
The invention relates to a **surgical** instrument for **treating** female urinary **incontinence** , of the type described in PCT/SE95/00964 the content of which is incorporated herein by reference, comprising a shank having a handie at one end thereof, and two **curved needle** -like elements which are each attached at one end thereof to one end of a **tape** to be implanted into the body, and are constructed to be connected one at the...

...thereof each element being
intended to be passed into the body via the anterior

(suburethral) **vaginal** wall and being dimensioned to extend from the inside surface of the **vaginal** wall over the back of the pubic bone to the outside of the abdominal wall...

...of the surgical instrument,
FIG. 3 is an exploded side view of one of the **needles** and **tape** and shrinkage hose to be connected with said **needle** ,
FIG. 4 is a side view of the **needle** in FIG. 3 with the **tape** connected therewith,
FIG. 5 is an enlarged fragmentary axial cross sectional view of a coupling of the instrument for con
necting an exchangeable **needle** thereof, and
FIG 6 is a side view of two **needles** and a **tape** interconnecting said **needles** .

In the following description the same reference nume
rals have been used as in PCT...

...of further reduced dia
meter joining the threaded portion 18, end portion 19 forming a **guide** pin at said other end of the shaft.

Portions 18 and 19 are received in portion is noncircular.

The surgical instrument also includes an exchangeable and disposable **needle** 21 which at one end thereof is attached to the shank at one end of the **needle** and extends over substantially a quarter of a circle to the other, free end thereof in order to follow substantially the profile of the pubis between the **vagina** and the abdominal wall. The **needle** has uniform circular cross section and has a smooth, preferably polished outside surface. At the free end thereof the **needle** forms a point 22 by being terminated by a conical portion.

Claim

1. **Surgical** instrument for **treating** female urinary **incontinence** , comprising a shank (10) having a handle (11) at one end thereof, and two **curved** **needle** -like elements (21) which are each attached at one end thereof to one end of a **tape** (26) to be implanted into the body, and are constructed to be connected one at...

...thereof each element being intended to be passed into the body via the anterior (suburethral) **vaginal** wall and being dimensioned to extend from the inside surface of the **vaginal** wall over the back of the pubic bone to the outside of the abdominal wall...

...h a r a c t e r i z e d in that the **tape** comprises * **netting** (26) enclosed by a thin plastic sheath (34).

2 Instrument as in claim 1 c h a r a c t e r i z * d in that the **netting** (26) is made of polypropylene.

3 Instrument as in claim 2 c h a r...

...a c t e r i z e d in that the sheath (34) is **perforated** at the **longitudinal** center thereof.

Instrument as in any of claims I to 4 c h a r a c t e r i z e d in that the **netting** (26) and the sheath are interconnected by stitching ((35).

6 Instrument as in any of...

...h a r a c t e r i z e d in that the **needle** -like element (21) comprises a non-circular end portion fitting into a non-circular socket...

...c t e r i z e d in that said end portion of the **needle** -like element (21) joins the rest of the element by a conical portion (32) **tapering** towards a shoulder (33) on the **needle** -like element.

. Instrument as in claim 7 c h a r a c t e r i z e d in that the **netting** (26) and the sheath (34) are con nected to the **needle** -like element (21) by gluing to said conical portion (32).

9 Instrument as in claim...

...h a r a c t e r i z e d in that the **netting** (26) and the sheath (34) at the site of attachement thereof are covered by a...

...hose (36) abuts the shoulder (33) and is substantially flush with the surface of the **needle** -like element at said ...h a r a c t e r i z e d in that the **netting** (26) and the sheath (34) project from the shrink hose (36) at the other end...

40/3,K/31 **(Item 31 from file: 348)**
DIALOG(R)File 348:EUROPEAN PATENTS

00795765
Suture passer
Instrument zum Durchfuhren eines Nahfadens
Passe-fil pour suture
PATENT ASSIGNEE:
BOSTON SCIENTIFIC IRELAND LIMITED, (2149020), (Barbados Head Office), Financial Services Centre, Bishop's Court Hill, Saint Michael, Barbados, (BB), (applicant designated states: AT;BE;CH;DE;DK;ES;FR;GB;GR;IE;IT;LI;LU;MC;NL;PT;SE)
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LEGAL REPRESENTATIVE:
Wolhandler, Jacques (152302), Rechtsanwalt, Maria-Theresia-Str. 13/1, 81675 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 740925 A1 961106 (Basic) RELATED TO
EP 740925 B1 990303
APPLICATION (CC, No, Date): EP 96110856 930405; (US) 5439467
PRIORITY (CC, No, Date): US 862847 920403
DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE
RELATED PARENT NUMBER(S) - PN (AN):
EP 633748 (EP 939092615)
INTERNATIONAL PATENT CLASS: A61B-017/04; A61B-017/062;
ABSTRACT WORD COUNT: 138

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	9909	642
CLAIMS B	(German)	9909	618
CLAIMS B	(French)	9909	675
SPEC B	(English)	9909	5538
Total word count - document A			0
Total word count - document B			7473
Total word count - documents A + B			7473

...ABSTRACT A1
A suture passer is provided comprising an elongate tubular probe **guide** (125) extending in a distal direction from a handle (110). An elongate pointed probe (115) is disposed to be axially movable within the tubular probe **guide** (125). A recess (160) is provided on the probe (115) and an opening (130) is provided on the tubular probe **guide** (125) for receiving a suture. The probe (115) may be moved axially with respect to the probe **guide** (125) such that the recess (160) aligns with the opening (130) for receiving the suture...

SPECIFICATION The present invention relates to the treatment of stress urinary **incontinence** "SUI" and, in particular, to a suture passer for the **surgical treatment** of SUI in females.
Genuine stress **incontinence** is the involuntary loss of urine due to a sudden rise in intra-abdominal pressure...

...that between 40% and 50% of young, healthy nulliparous women admit to

occasional mild stress **incontinence** ; however, at least 80% of stress **incontinence** patients are in the perimenopausal age group and are multiparous. Raz3) has suggested that the...

...interacts with other factors to contribute to continence, a short urethra alone will not produce **incontinence** . Urethral length varies considerably in normal women, and women with proven genuine stress urinary **incontinence** do not invariably have urethral shortening. Urethrotrigonal anatomy, which can be demonstrated by lateral cystourethrography...

...clinical finding of cystourethrocele. However, clinical experience has shown that the coexistence of cystourethrocele and **incontinence** does not predict that the **incontinence** is of a genuine stress variety. The transmission of intra-abdominal pressure to the intra...

...and narrowing the proximal urethra. Two of the most popular operations today for female stress **incontinence** are the Marshall-Marchetti-Krantz and Birch vesicourethropexies. The Marshall-Marchetti-Krantz technique has at...

...and the use of general anaesthetics. In addition, there remains a need for improved medical **instrumentation** such as **suture** passers for use in connection with SUI treatment and other **medical procedures** . The United States Patent U.S. 2,738,790 discloses a stitching instrument for stitching...

...tube terminates before a slot formed in the forward end of the body portion. A **needle** having a hook portion for grasping a suture is movably disposed in the flattened tube...

...in the dependent claims. The suture passer comprises a handle and an elongate tubular probe **guide** extending in a distal direc

CLAIMS adapted for releasably retaining a suture, comprising:

a handle (110, 810);

an elongate tubular probe **guide** (125, 825) extending in a distal direction from the handle (110, 810);

an elongate pointed probe (115, 815) axially movably disposed within the tubular probe **guide** (125, 825) to facilitate penetration of tissue, the probe having a recess (160),

characterized in that

an opening (130, 830) is provided on the tubular probe **guide** (125, 825) for receiving a suture, said opening (130, 830) extending radially inwardly into said probe **guide** (125, 825) and then generally axially along said probe **guide** (125, 825) towards the distal end of the probe **guide** (125, 825),

wherein the probe (115, 815) is axially movable with respect to the probe **guide** (125, 825) between a first position in which the recess (160) is aligned with the...

...and the distal tip (120) of the probe (115, 815) is retracted within the probe **guide** (125, 825); in a second position the recess (160) is out of alignment with the...

...tip of the pointed probe is normally retracted within the distal end of the probe **guide** , and distally extended beyond the probe **guide** only during manual manipulation of the control.

8. A suture passer as in any one...

...in any one of Claims 1 to 10, wherein the distal end of the probe **guide** (125, 825) is provided with a blunt atraumatic tip (140) which allows tactile positioning digitally...

...as in any one of the Claims 1 to 11, wherein said elongate tubular probe **guide** (125, 825) and said elongate pointed probe (115, 815) are curved.

13. A suture passer...

40/3,K/33 (Item 33 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00245392 **Image available**
SURGICAL TREATMENT **OF STRESS URINARY** INCONTINENCE
TRAITEMENT CHIRURGICAL DE L' INCONTINENCE **URINAIRE A L'EFFORT**
Patent Applicant/Assignee:
VESITEC MEDICAL INC,
Inventor(s):
BENDEREV Theodore V,
NAVES Neil H,
LEGOME Mark J,
Patent and Priority Information (Country, Number, Date):
Patent: WO 9319678 A2 19931014
Application: WO 93US3202 19930405 (PCT/WO US9303202)
Priority Application: US 92862847 19920403
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AT AU BB BG BR CA CH CZ DE DK ES FI GB HU JP KP KR KZ LK LU MG MN MW NL
NO NZ PL PT RO RU SD SE SK UA VN AT BE CH DE DK ES FR GB GR IE IT LU MC
NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG
Publication Language: English
Fulltext Word Count: 27348
SURGICAL TREATMENT **OF STRESS URINARY** INCONTINENCE
TRAITEMENT CHIRURGICAL DE L' INCONTINENCE **URINAIRE A L'EFFORT**
Fulltext Availability:
Detailed Description
Claims

English Abstract
The **surgical treatment** of stress urinary **incontinence** is disclosed. The disclosed methods include: 1) a technique of probe passage to avoid injuring...

...these methods and results of procedures with some of these methods are disclosed. Novel drill **guides** , suture passers, suture **tensioners** , surgical drapes, and support for use in the surgical method are also disclosed. The drill **guide** comprises a housing with an axially movable probe and a drill **guide** channel.

French Abstract
On decrit le traitement de l' **incontinence** urinaire a l'effort. Les methodes decrites incluent: 1) une technique concernant le passage d...

...procedes et les resultats obtenus avec certains d'entre eux. On decrit aussi de nouveaux **guide** -meches, passeurs de **sutures** , tendeurs de **sutures** et differents **instruments** et dispositifs connexes utilises avec ce procede chirurgical.

Detailed Description
SURGICAL TREATMENT OF STRESS
URIINARY **INCONTINENCE**
Background of the Invention
The present invention relates to the treatment of stress urinary **incontinence** IISUI,11 and, in particular to improved **methods** and **surgical** devices f or the **surgical treatment** of SUI in females. The devices disclosed herein are additionally useful in a wide variety of other surgical procedures,

Genuine stress **incontinence** is the involuntary loss of urine due to a sudden rise in intra-abdominal pressure...

...that between 40% and 50% of young, healthy nulliparous women admit to occasional mild stress **incontinence** ; however, at least 80% of stress **incontinence** patients are in the perimenopausal age group and are multiparous. Raz3 has suggested that the...

...interacts with other factors to contribute to continence, a short urethra alone will not produce **incontinence** . Urethral length varies considerably in normal women, and women with proven genuine stress urinary **incontinence** do not invariably have urethral shortening.

Urethrotr gonal anatomy, which can be demonstrated by lateral...

...f inding of cystourethrocele.

However, clinical experience has shown that the coexistence of cystourethrocele and **incontinence** does not predict that the **incontinence** is of a genuine stress variety.

The transmission of intra-abdominal pressure to the intra...and narrowing the proximal urethra - Two of the most popular operations today for female stress **incontinence** are the Marshall-Marchetti-Krantz and Birch vesicourethropexies. The Marshall-Marchetti-Krantz technique has at...

...and the use of general anesthetics. In addition, there remains a need for improved medical **instrumentation** such as drill **guides** and **suture** passers for use in connection with SUI **treatment** and other **medical procedures** .

Summary of the Invention

There is provided in accordance with one aspect of the present invention a drill **guide** for directing a drill bit at a selected site on a bone. The drill **guide** comprises a housing, and at least two chambers extending axially within the housing, Each of...

...axially movably disposed within the housing, without the use of a distinct plunger. A drill **guide** channel extends axially through the housing, within a plane parallel to the plane joining the...

Claim
14 A drill **guide** for directing a drill bit at a selected site, permitting drilling through tissue and into...

...bone, comprising:
a housing;
at least one probe mounted to the housing; and
a drill **guide** channel extending through the housing.

2 A drill **guide** as in Claim 1, wherein the drill **guide** channel further comprises a slot extending radially through the wall of the drill **guide** channel and axially throughout substantially the entire length thereof,

3 A drill **guide** as in Claim 1, wherein the probe is axially movably disposed in a probe channel.

4 A drill **guide** as in Claim 1, wherein the probe is axially movably disposed within the drill **guide** channel,

5 A drill **guide** as in Claim 2, further comprising a tissue retention structure on the distal tissue contacting surface of the housing.

6 A drill **guide** as in Claim 5, wherein the tissue retention structure comprises a plurality of serrations on the tissue contacting surface,

7 A drill **guide** as in Clain 1, comprising two probes.
81 A drill **guide** as in Claim 7 , wherein the center line of the two probes are separated by...

...from about 5 mm to about 20 mm.

9 A method of positioning a drill **guide** over a drilling site on a bone, comprising the steps of*
providing a drill **guide** of the type comprising a housing, at least two axially extendable probes within the housing and a drill **guide** extending -through the housing;
extending a first probe from the retracted position to the extended...
...retracting both probes from the extended position to the retracted position,, and translating the drill **guide** along a desired axis, and then reextending both probes from the retracted position to the...

...of installing a bone anchor in a bone,
comprising the steps of:
providing a drill **guide** of the type defined in claim 1;
advancing each of said probes through tissue until...

...reach their furthest distal travel in said housing;
advancing a drill bit through the drill **guide** channel and drilling a hole in the bone;
withdrawing the drill bit from the drill **guide** channel; and thereafter
advancing a suture anchor through the drill **guide**

channel and into the bone,

11 A suture passer of the type adapted for releasably retaining a suture, comprising:
a handle;
an elongate tubular probe **guide** extending in a distal direction from the handle;
an elongate pointed probe axially movably disposed within the tubular probe **guide** to facilitate penetration of tissue; and
a recess on the probe and an opening on the tubular probe **guide** for receiving a suture, wherein the probe is axially movable with respect to the probe **guide** between a first position in which the annular recess is aligned with the opening for...

...E6Sfl/J,Dd 8L96 I X6 OM
advancing the first and second projections through the **vaginal** mucosa and towards an internal support structure to elevate the bladder neck;
thereafter deflecting the...

...method as in Claim 16, wherein the support structure comprises ligamentous tissue.

18 A surgical **device** f or orienting the **longitudinal** axis of a drill for percutaneous insertion into a patient's body,, with respect to...stop connected to the frame and adapted for insertion within a body orifice;
a drill **guide** connected to the frame and adapted to be positioned outside of the patient's body;
at least a first lumen extending'through the drill **guide** , having a longitudinal axis; ,
wherein the drill stop is positioned within the body at a...

...that intercepts an extension of the longitudinal axis extending through the lumen in-the drill **guide** .

19 A device as in Claim 18, further comprising one or more axially movably disposed...

...A method of providing access from the pubic region through the pubic bone to the **vagina** ,, comprising the steps of:
providing a surgical device as defined in Claim 18,
transvaginally positioning the drill stop against the **vaginal** mucosa;
Pup !94PTd aqq oq peanoas qaXovaq BUTqUnOW P
!qUaTqpd aqq JO UOTqaod
P 4sP9T...mass, and the two ends of suture around the second tissue mass;
positioning a suture **tensioning** structure having a preselected cross sectional area between either of the first or second tissue...

...the suture;
tying the suture around the first and second tissue masses and the suture **tensioner** ; and thereafter
auoq
aq4 UT POUOT4Tsod ST aOqOUP PTPS aa4;P lOqOUP PTPS 04 P9JnO9S...

40/3,K/54 (Item 54 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

01330529
TRANSCUTANEOUS DEVICE FOR TREATING FEMALE URINARY INCONTINENCE **BY SUB-URETHRAL** STRIP
PERKUTANE VORRICHTUNG ZUR BEHANDLUNG VON STRESSBEDINGTER HARNINKONTINENZ BEI FRAUEN MIT SUBURETHRALEN STREIFEN
DISPOSITIF PERCUTANE POUR LE TRAITEMENT DE L' INCONTINENCE **URINAIRE D'EFFORT DE LA FEMME PAR BANDELETTE SOUS URETRALE**
PATENT ASSIGNEE:
SOFRADIM PRODUCTION, (2072713), 116, avenue du Formans, 01600 Trevoux, (FR), (Proprietor designated states: all)
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LEGAL REPRESENTATIVE:
Maureau, Philippe et al (45628), Cabinet GERMAIN & MAUREAU, BP 6153, 69466 Lyon Cedex 06, (FR)
PATENT (CC, No, Kind, Date): EP 1248567 A1 021016 (Basic)
EP 1248567 B1 040331
WO 2001052750 010726
APPLICATION (CC, No, Date): EP 2001907632 010118; WO 2001FR167 010118
PRIORITY (CC, No, Date): US 489336 000121; FR 0012753 001005
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: A61B-017/04
NOTE:
No A-document published by EPO
LANGUAGE (Publication,Procedural,Application): French; French; French
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	200414	595
CLAIMS B	(German)	200414	581
CLAIMS B	(French)	200414	594
SPEC B	(French)	200414	5068
Total word count - document A			0
Total word count - document B			6838
Total word count - documents A + B			6838

See related (US): 2003/0036676 6478727 6406423

TRANSCUTANEOUS DEVICE FOR TREATING FEMALE URINARY INCONTINENCE **BY SUB-URETHRAL** STRIP
DISPOSITIF PERCUTANE POUR LE TRAITEMENT DE L' INCONTINENCE **URINAIRE D'EFFORT DE LA FEMME PAR BANDELETTE SOUS URETRALE**

...SPECIFICATION B1
La presente invention se rapporte aux problemes d' **incontinence** urinaire chez la femme et plus particulierement aux problemes d' **incontinence** urinaire d'effort. L'invention concerne plus particulierement un dispositif percutane pour le traitement de l' **incontinence** urinaire d'effort de la femme par bandelette sous uretrale.

Ces problemes sont actuellement traites...

...comprenant des instruments specialises.
Il est notamment connu d'utiliser pour le traitement de l' **incontinence** urinaire, une bandelette susceptible d'etre implantee sous le canal uretral, et une gaine entourant...

...CLAIMS B1

1. Device for treating urinary stress **incontinence** in women, comprising:
 - a flexible and elongate means (1) comprising a **tape** (6) for supporting the urethra (100) and a protective sheath (5) lying flat and enveloping said **tape** (6);
 - a puncturing **needle** (3) with an active distal end (3a) and a proximal end (3b) connected to a...

...of the flexible means (1), characterized in that the proximal end (3b) of the puncturing **needle** (3) is connected to the first end (1a) of the flexible means (1) by virtue...

...Device according to Claim 1, characterized in that the protective sheath (5) completely envelopes the **tape** (6), including its first and second ends.

3. Device according to Claim 1 or 2...

...parts that can be separated by sliding them in two opposite directions relative to the **tape** (6), characterized in that it comprises a splittable means (15) between the two central and...

...parts that can be separated by sliding them in two opposite directions relative to the **tape** (6), characterized in that it comprises a filament (16c) arranged roughly at right angles to the longitudinal axis of the sheath (5), so as to **cut** said **sheath** (5) when traction is exerted on said filament (16c).

5. Device according to any of...

...material.

6. Device according to any of Claims 1 to 5, characterized in that the **tape** (6) is formed from a macroporous knitted material.

7. Device according to any of Claims 1 to 6, characterized in that the **tape** (6) in its central region has a resorbable hydrophilic film reducing the risk of adhesion...

...8. Device according to any of Claims 1 to 7, characterized in that the puncturing **needle** (3) has a **curved** part continuously adjacent to a roughly straight part ending in its proximal end (3b).

9...

...Device according to Claim 12, characterized in that the tubular traction element (20) andthe puncturing **needle** (3) are **assembled** by screwing.

14. Device according to Claim 12 or 13, characterized in that the tubular ...

...15. Device according to any of Claims 1 to 14, characterized in that the puncturing **needle** (3) is the only **puncturing needle** .

16. **Device** according to any of Claims 1 to 15, characterized in that the **tape** (6) is cut from an open knit made up of two layers formed by two threaded **guide** bars each - one full **guide** and one empty **guide** - these two bars being moved symmetrically for open **mesh** .

40/3,K/56 (Item 56 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

01270346
Suture **insertion** device **for the treatment of urinary stress** incontinence
Vorrichtung zur Einfuhrung chirurgischer Nahfaden zur Behandlung stressbedingter Harninkontinenz
Dispositif d'introduction de suture pour le traitement de l' incontinence **urinaire d'effort**
PATENT ASSIGNEE:
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INVENTOR:
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PATENT (CC, No, Kind, Date): EP 1093758 A1 010425 (Basic)
APPLICATION (CC, No, Date): EP 309289 001020;
PRIORITY (CC, No, Date): AU 99PQ3621 991022
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: A61B-017/04; **A61F-002/00**
ABSTRACT WORD COUNT: 142
NOTE:
Figure number on first page: 5

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FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200117	1764
SPEC A	(English)	200117	5504
Total word count - document A			7268
Total word count - document B			0
Total word count - documents A + B			7268

Suture **insertion** device **for the treatment of urinary stress** incontinence
Dispositif d'introduction de suture pour le traitement de l' incontinence **urinaire d'effort**
...INTERNATIONAL PATENT CLASS: **A61F-002/00**

...ABSTRACT A1
The invention provides a surgical **instrument** (10) for inserting an **elongate** element (56) into a human patient. In the preferred form of the invention the instrument...

...12) defining an arc corresponding to the general curvature of a passage between the anterior **vaginal** wall and the abdomen of a female patient and having a cutting tip (14) at...

...SPECIFICATION particularly the invention relates to an apparatus and method for the treatment of female urinary **incontinence** .
Female **incontinence** generally occurs due to deterioration of or damage to muscle tissue and ligaments in the pelvic region. This results in involuntary leakage of **urine** from the **urethra** due to **lack** of **control** of the patient's pelvic muscles, particularly the urogenital

diaphragm and pubo urethral ligaments. It...

...and US Patent 5,899, 909 (Claren). United States Patent 5,112,344 describes a **method** and apparatus for **treating** female **incontinence** . The **surgical** instrument for the application of a filamentary element into the body comprises a tubular shaft having a handle at one end and a flexible **needle** slidably receivable in the shaft and adapted at one end to receive a filamentary element. The method of treating female **incontinence** comprises looping a filamentary element between the wall of the **vagina** and the rectus abdominis sheath in the anterior wall of the abdomen whereby it masses to each side of the urethra, adjusting the loop to bring the **vaginal** wall and the urethra into the correct spatial relationship to the pubis allowing the development of scar tissue between the **vaginal** wall and the anterior wall of the abdomen pubic symphysis and removing the filamentary element.

The Claren Patent, United States Patent 5,899,909, also describes a **surgical** instrument and a method for **treating** female urinary **incontinence** . The instrument comprises a shank having a handle at one end thereof, and two **curved** **needle** -like elements which are connected at one end thereof each with one end of a **tape** intended to be implanted into the body. These elements can be connected one at a...

...portion of the shank and are intended to be passed into the body via the **vagina** , each element being dimensioned to extend from the inside of the **vaginal** wall over the back of the pubic bone to the outside of the abdominal wall. When practicing the method the **tape** is passed into the body via the **vagina** first at one end and then at the other end at one side and the...

...the urethra to form a loop around the urethra, located between the urethra and the **vaginal** wall. The **tape** is extended over the pubis and through the abdominal wall and is tightened. Then, the **tape** ends are cut at the abdominal wall, and the **tape** is left implanted in the body.

In its broadest form the invention provides a surgical **instrument** for use in placing an **elongate** element into a patient said **instrument** comprising:

an **elongate** shaft defining an internal passage, said shaft having a cutting tip formed on one end...

...use in placing a filamentary element into a female patient so as to form a **sling** or loop around the urethra extending over the back of the pubic bone, to the...

...use in placing a filamentary element into a female patient so as to form a **sling** or loop around the urethra extending over the back of the pubic bone, to the...means comprises screw threads formed on the outer surface of the shaft. Preferably the shaft **tapers** divergently towards the handle attachment means so as to form a smooth transition between a...

...instrument for use in placing a filamentary element into a female patient to form a **sling** or loop between an anterior surface of the **vaginal** wall, around the back of the pubic bone to the outside of the abdominal wall...

...method of introducing a filamentary element into a female patient so as to form a **sling** or loop extending around the urethra to an anterior surface of the abdominal wall, said...

...having a longitudinally extending internal passage. into the patient through the anterior surface of the **vaginal** wall, so as to pass on one side of the urethra between the pubis and...

...the patient;

e) inserting the shaft into the patient through the anterior surface of the **vaginal** wall, so as to pass on the other side of the urethra between the pubis...

...of para-urethral incisions are made at or very near each anterior sulcus of the **vagina** . A tunnel is created by blunt dissection between the urethra and the **vaginal** wall, extending from each **vaginal** incision. Prior to conducting step (e) the end of the filamentary element adjacent the **vagina** is passed through that tunnel and out of the second of the two incisions. Step...invention.

Figure 3 shows an exploded perspective view of the elements required to perform an **operation** using the **surgical** instrument of the invention.

Figures 4 - 6 show the manner in which the surgical instrument...

...selected so that the shaft is able to pass through an anterior surface of the **vaginal** wall behind the pubis to emerge through the abdominal wall. The radius of curvature is...manner described above and the shaft will be inserted into a patient typically through the **vagina** from a position inwards from the urethro vesical junction, the cutting tip passing into the...

...it is desired to conduct the operation using a two incision procedure, two para-urethral **vagina** incisions will be made at or very near each anterior sulcus of the **vagina** . A tunnel will then be formed by blunt dissection between the urethra and the **vaginal** wall. the tunnel extending between the two para-urethral incisions. Typically the two incisions and...

...be withdrawn from the patient from either the abdominal side of the patient or the **vaginal** side of the patient and the shaft is specifically shaped and configured for this purpose...

...filamentary element through the shaft.

It will be noted that the shaft 12 has a **tapered** portion 60 adjacent the trailing end 17 thereof which provides a smooth transition between the cylindrical central portion of the shaft and the threaded end 17 thereof. This **tapered** portion 60 is specifically designed to allow the shaft to be drawn in a forward direction through the patient without causing any further tissue damage to the patient. The **taper** angle of the **tapered** position should be small, that is, about 5(degree) or less. Other connection arrangements are...

...be possible. Other alternatives are discussed below.

Where the two incision process is preferred. the **vaginal** end of the filament will be **guided** through the aforementioned tunnel and out of the second incision. The handle will then be...

...shaft will need to pass through the patient which is why the smooth and slightly **tapered** section 60. referred to above, is provided and also the fact that the threads 16...of the handle portion 72 causes difficulty in passing the instrument through a patient.

Clearly, **different** forms of **handle** **grip** arrangements will be possible and specifically envisaged is an arrangement in which longitudinally aligned gripping...so as to rest within the patient, then the shaft may be withdrawn from the **vaginal** side of the patient. This will require only a single abdominal side incision. Indeed, it may be possible to perform the procedure from the **vaginal** side of the patient exclusively provided it is possible to cause a filamentary material to...

...non-circular cross sectional configuration.
Figures 15 and 16 depict an alternative version of the **cutting** tip of the **instrument** . As shown in figure 15 and figure 16 the cutting tip is defined by two...

CLAIMS 1. A surgical **instrument** for use in placing an **elongate** element into a patient said **instrument** comprising:

an **elongate** shaft defining an internal passage, said shaft having a cutting tip formed on one end...

...any one of claims 1 to 10 wherein the internal passage terminates rearward of the **cutting** tip.

12. A surgical **instrument** for use in placing a filamentary element into a female patient so as to form a **sling** or loop around the urethra extending over the back of the pubic bone to the...

...use in placing a filamentary element into a female patient so as to form a **sling** or loop around the urethra over the back of the pubic bone, to the abdominal...

...surface of the shaft.

18. A surgical instrument according to claim 17 wherein the shaft **tapers** divergently towards the handle attachment means so as to form a smooth transition between a...

...aligned with said other end of the shaft when the handle and the shaft are **operatively** connected.

21. A **surgical** instrument according to claim 20 wherein said elongate connection portion has a distal end of...instrument for use in placing a filamentary element into a female patient to form a **sling** or loop around the urethra extending over the back of the pubic bone to the...

...method of introducing a filamentary element into a female patient so as to form a **sling** or loop extending around the urethra to the abdominal wall, said method including the steps...

...internal passage into the patient through a first incision in the anterior surface of the **vaginal** wall, so as to pass on one side of the urethra between the pubis and...

...the patient;

e) inserting the shaft into the patient through the anterior surface of the **vaginal** wall, so as to pass on the other side of the urethra between the pubis...

...to conducting step c) a second incision is made through the anterior surface of the **vaginal** wall and a tunnel is created between the first and second incisions, and the end of the filamentary element adjacent the **vagina** is passed through said tunnel and out of said second incision.

33. A method according...

...to pass a filamentary element through a female patient through an anterior wall of the **vagina** to an anterior wall of the abdomen through the wall thereof into the interior passage wherein the filamentary element forms a sub urethral **sling** , in part extending over the back of the pubic bone to the abdominal wall.

35...

40/3,K/71 **(Item 71 from file: 348)**
DIALOG(R)File 348:EUROPEAN PATENTS

00432760
Surgical correction **of female urinary stress** incontinence **and** kit **therefor.**
Chirurgische Korrektur der weiblichen stressbedingten Harninkontinenz und Besteck dazu.
Correction chirurgicale **de l'** incontinence **urinaire feminine causee par le stress et jeu d'instruments.**
PATENT ASSIGNEE:
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PATENT (CC, No, Kind, Date): EP 470308 A1 920212 (Basic)
APPLICATION (CC, No, Date): EP 90308730 900808;
PRIORITY (CC, No, Date): EP 90308730 900808
DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IT; LI; LU; NL; SE
INTERNATIONAL PATENT CLASS: A61B-017/06; A61B-019/00; **A61F-002/48**
ABSTRACT WORD COUNT: 63

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CLAIMS A	(English)	EPABF1	1654
SPEC A	(English)	EPABF1	3474
Total word count - document A			5128
Total word count - document B			0
Total word count - documents A + B			5128

related to (US) 5013292

Surgical correction **of female urinary stress** incontinence **and** kit **therefor.**
Correction chirurgicale **de l'** incontinence **urinaire feminine causee par le stress et jeu d'instruments.**
...INTERNATIONAL PATENT CLASS: **A61F-002/48**

...ABSTRACT A1
A surgical **kit** is provided, for a urethropexy procedure, comprising at least one **needle** (comprising a cannula (17) and a **trocar** (18), a pair of implants (1) and a tray for supporting and **packaging** the **needle** (s) and implants. The **kit** is sterilizable. A procedure for urethropexy is disclosed which may be carried out under local...

...SPECIFICATION BACKGROUND OF THE INVENTION
Field Of The Invention:
The present invention is directed to a **method** for the **surgical correction** of female urinary stress **incontinence** and a **kit** therefor. More particularly, the present invention is directed to a surgical technique for urethropexy and a **kit** containing materials to effectuate the technique.
Description Of The Prior Art:
Female urinary stress **incontinence** is **treated surgically** by tying the urethro-vesical junction to the back of the symphysis pubis. Kelly

1913...

...morbidity and cost.

It is a still further object of the invention to provide a **kit** containing devices necessary to effectuate the surgical technique.

It is a yet further object to...

...the invention, as will become apparent hereinafter, have been attained by the provision of a **method** for **surgically correcting** female urinary stress **incontinence** comprising the steps of:

(1) providing a pair of implants, each of said implants comprising ...

...end disposed on a single side of said head portion;

(2) providing at least one **needle** , said at least one **needle** comprising a cannula and a **trocar** , said cannula being receivable of said **trocar** , said **trocar** being removably disposable within said cannula, said at least one **needle** being bendable to a desired degree of curvature, said first and second ends of said thread being guidingly receivable within said cannula;

(3) incising only the **vaginal** mucosa with an incision about 1 cm in length at the urethro-vesical junction;

(4) introducing said **needle** at the right distal extremity of said **vaginal** incision and non-traumatizingly guiding said **needle** along the symphysis pubis to a first point about 3 cm to the right of a median line at the superior border of the symphysis pubis and passing said **needle** through the skin at this first point;

(5) incising the skin with a cutaneous incision about 0.5 cm in length at said first point;

(6) removing said **trocar** from said **needle** while leaving the cannula in place;

(7) introducing the first end of said thread from one of said pair of implants into said cannula until it protrudes into the **vagina** ;

(8) withdrawing said cannula through the **vagina** ;

(9) introducing said **needle** at the right distal extremity of said **vaginal** incision and non-traumatizingly guiding said **needle** along the symphysis pubis to said incision of step (5);

(10) removing said **trocar** from said **needle** while leaving the cannula in place;

(11) introducing the second end of said thread from said one of said pair of implants into said cannula until it protrudes into the **vagina** ;

(12) withdrawing said cannula through the **vagina** ;

(13) introducing said **needle** at the left distal extremity of said **vaginal** incision and non-traumatizingly guiding said **needle** along the symphysis pubis to a second point about 3 cm to the left of a median line at the superior border of the symphysis pubis and passing said **needle** through the skin at this second point;

(14) incising the skin with a cutaneous incision about 0.5 cm in length at said second point;

(15) removing said **trocar** from said **needle** while leaving the cannula in place;

(16) introducing the first end of said thread from the other of said pair of implants into said cannula until it protrudes into the **vagina** ;

(17) withdrawing said cannula through the **vagina** ;

(18) introducing said **needle** at the left distal extremity of said **vaginal** incision and non-traumatizingly guiding said **needle** along the symphysis pubis to said incision of step (14);

(19) removing said **trocar** from said **needle** while leaving the canula in place;

(20) introducing the second end of said thread from the other of

said pair of implants into said cannula until it protrudes into the **vagina** ;

(21) withdrawing said cannula through the **vagina** ;

(22) burying each of said implants under the skin over the symphysis pubis;

(23) adjusting...

...left side to hold the desired urethro-vesical angle.

Additionally, the present invention provides a **kit** for use in the **surgical correction** of female urinary stress **incontinence** comprising:

at least one **needle** , said **needle** comprising a cannula and a **trocar** , said cannula being receivable of said **trocar** , said **trocar** being removably disposable within said cannula, said **needle** being bendable to a desired degree of curvature; and

a pair of implants, each of...and second ends being guidingly receivable within said cannula.

In a particularly preferred embodiment, the **kit** comprises:

a pair of implants, each of said implants comprising a head portion and a...

...ends disposed on a single side of said figure eight shaped member;

a pair of **needles** , each of said **needles** comprising a cannula and a **trocar** , said cannula being receivable of said **trocar** , said **trocar** being removably disposable within said cannula, each of said **needles** being bendable to a desired degree of curvature, said cannula, in use, being guidingly receivable...

...said first end and said second end of said thread;

a tray for supporting and **packaging** said pair of **needles** and said pair of implants.

The present invention also provides a saddle for supporting a...

...the surgical implant illustrated in Fig. 1A.

Fig. 2 is a plan view of a **kit** according to the present invention.

Fig. 3A is a front view of a saddle, according...

...saddle illustrated in Fig. 3A.

DETAILED DESCRIPTION OF THE INVENTION

The present invention provides a **surgical corrective technique** for all human female stress urinary **incontinence** including fibrous perineal tissue due to irradiation by surgery or trauma. In particular, the technique...

...patients suffering from Alzheimer's disease, etc. The only contra-indication is for patients whose **vaginal** tissue cannot support abdominal pressure. Bladder atony, in itself, is a contra-indication.

A proper diagnosis depends upon a pertinent questionnaire stipulating the frequency and the quantity of urinary **incontinence** . Conscientious study of the matter concerning bladder instability is also required.

A proper diagnosis also...

...distended. The cystoscope is removed and the patient is asked to cough several times. Stress **incontinence** is clearly noted when urine exits the urethral meatus simultaneously with the coughing. A delay of a few seconds in the **incontinence** indicates a hyporeflexic or unstable bladder. Finally, the Bonney Test (Marshall) is performed to confirm...

...is taken and, if the urine culture is negative, no antibiotics are necessary. A pre- **operative medication** , e.g., Diazepam (5 gm) is

administered to alleviate anxiety, with the patient in the...
...depth. Afterwards, a small retractor allows visualization of the urethro-vesical junction region in the **vagina** , and a local anesthetic, e.g., about 2 cc of Xylocaine 2%, is injected at...

...from above. The head portion 3 may be formed of any medically acceptable non-biodegradable **implant material** , preferably a metallic material such as the surgical titanium alloy having the composition given in...of about 3-4 mm.

The intervention generally requires the utilization of at least one **needle** , preferably a pair of **needles** . The **needles** , as illustrated in Fig. 2, each comprise a cannula 17 and a **trocar** 19. The **trocar** is removably, slidingly, disposable with the cannula. Each of the **needles** is bendable to a desired degree of **curvature** . The **needles** are generally supplied with a radius of curvature of about 100-105 mm, preferably about 102 mm, but may be bent to conform to the internal **curve** of the patients **vagina** . The **needles** are generally about 150 mm long with the cannula having an outside diameter of about 0.80 to 0.95 mm and with the **trocar** having an outside diameter of about 0.60 mm, e.g., a 19.5 gauge **needle** .

The intervention generally proceeds, as follows:

(1) incising only the **vaginal** mucosa with an incision about 1 cm in length at the urethro-vesical junction;

(2) introducing said **needle** at the right distal extremity of said **vaginal** incision and non-traumatizingly guiding said **needle** along the symphysis pubis to a first point about 3 cm to the right of a median line at the superior border of the symphysis pubis and passing said **needle** through the skin at this first point;

(3) incising the skin with a cutaneous incision about 0.5 cm in length at said first point;

(4) removing said **trocar** from said **needle** while leaving the cannula in place;

(5) introducing the first end of said thread from one of said pair of implants into said cannula until it protrudes into the **vagina** ;

(6) withdrawing said cannula through the **vagina** ;

(7) introducing said **needle** at the right distal extremity of said **vaginal** incision and non-traumatizingly guiding said **needle** along the symphysis pubis to said incision of step (5);

(8) removing said **trocar** from said **needle** while leaving the cannula in place;

(9) introducing the second end of said thread from said one of said pair of implants into said cannula until it protrudes into the **vagina** ;

(10) withdrawing said cannula through the **vagina** ;

(11) introducing said **needle** at the left distal extremity of said **vaginal** incision and non-traumatizingly guiding said **needle** along the symphysis pubis to a second point about 3 cm to the left of a median line at the superior border of the symphysis pubis and passing said **needle** through the skin at this second point;

(12) incising the skin with a cutaneous incision about 0.5 cm in length at said second point;

(13) removing said **trocar** from said **needle** while leaving the cannula in place;

(14) introducing the first end of said thread from the other of said pair of implants into said cannula until it protrudes into the **vagina** ;

(15) withdrawing said cannula through the **vagina** ;

(16) introducing said **needle** at the left distal extremity of said **vaginal** incision and non-traumatizingly guiding said **needle** along the symphysis pubis to said incision of step (14);

(17) removing said **trocar** from said **needle** while leaving the canula in place;

(18) introducing the second end of said thread from the other of said pair of implants into said cannula until it protrudes into the **vagina** ;

(19) withdrawing said cannula through the **vagina** ;

(20) burying each of said implants under the skin over the symphysis pubis;

(21) adjusting...

...element to provide additional support. Such a reinforcement may be as simple as a small **strip** of biologically acceptable cloth, e.g., medical grade Dacron (polyethylene terephthalate polyester).

However, in the case of a reoccurrence of **incontinence** after a first procedure, as noted above, a saddle as illustrated in Figs. 3A, 3B... making sure not to create an umbilicus. By asking the patient to cough, to demonstrate **incontinence** , the sutures are then tied by lifting the urethro-vesical junction to a desired angular...

...and 1 year after the procedure.

As previously noted, the present invention also provides a **kit** , illustrated in Fig. 2 to aid in effectuation of the surgical procedure disclosed above. The **kit** provides a pair of **needles** comprising two cannula 17 and two **trocars** 19 and a pair of implants 1. The **needles** and implants are **packaged** on a tray 53 comprising a planar central portion 55 surrounded by an upstanding circumferential...

...of the pair of implants 1 therein. These hollow cylinders 65 and portions of said **trocars** 19 and cannulae 17 are engagingly received within the gaps 63 so as to hold the implants, **trocars** and cannulae in predetermined positions on the tray 53. The tray may be formed of...

...be bonded to the lip 59 of the tray, or preferably the tray may be **packaged** in a wrapping, to allow sterilization of the tray and its contents.

The above-described...

...age grouping, are set forth in Table 5. The explanation of those patients experiencing recurring **incontinence** are set forth in Table 6. The complications noted in the procedure are set forth...

...CLAIMS A1

1. A **kit** for use in the **surgical correction** of female urinary stress **incontinence** comprising:

at least one **needle** , said **needle** comprising a cannula and a **trocar** , said cannula being receivable of said **trocar** , said **trocar** being removably disposable within said cannula, said **needle** being bendable to a desired degree of curvature; and

a pair of implants, each of...

...head portion, said first and second ends being guidingly receivable within said cannula.

2. The **kit** according to Claim 1, comprising a pair of said **needles** .
3. The **kit** according to Claim 1, wherein said head portion of said implant comprises a substantially figure...

...second ends disposed on said single side of said figure eight shaped member.

4. The **kit** according to Claim 1, further comprising a tray for engagingly supporting and **packaging** said at least one **needle** and said pair of implants.
5. The **kit** according to Claim 4, wherein said tray is sterilizable.
6. The **kit** according to Claim 1, further comprising a saddle member for supporting a neck portion of...

...portions of said pair of implants to maintain a predetermined urethro-vesical angle.

7. A **kit** for use in the **surgical correction** of female urinary stress **incontinence** comprising:

a pair of implants, each of said implants comprising a head portion and a...

...ends disposed on a single side of said figure eight shaped member;

a pair of **needles** , each of said **needles** comprising a cannula and a **trocar** , said cannula being receivable of said **trocar** , said **trocar** being removably disposable within said cannula, each of said **needles** being bendable to a desired degree of curvature, said cannula, in use, being guidingly receivable...

...said first end and said second end of said thread;

a tray for supporting and **packaging** said pair of **needles** and said pair of implants.

8. The **kit** according to Claim 7, wherein said tray includes holding means for holding said pair of **needles** and said pair of implants in predetermined positions on said tray.
9. The **kit** according to Claim 8, wherein said holding means comprises a pair of hollow cylinder members supportingly receivable of respective suture portions of said pair of implants therein.
10. The **kit** according to Claim 9, wherein said holding means further comprises a plurality of raised portions...

...receivable of respective portions of said pair of hollow cylinder member and said pair of **needles** .

11. The **kit** according to Claim 7, wherein said tray is sterilizable.
12. The **kit** according to Claim 7, wherein each of said pair of **needles** is about 150 mm long.
13. The **kit** according to Claim 12, wherein each of said pair of **needles** is provided with a predetermined **curvature** .
14. The **kit** according to Claim 13, wherein said predetermined curvature has a radius of curvature of about 102 mm.
15. The **kit** according to Claim 12, wherein for each of said pair of **needles** , said cannula has an outside diameter of about 0.80 to 0.95 mm and said **trocar** has an outside diameter of about 0.60 mm, said **trocar** being slidable within said cannula.
16. The **kit** according to Claim 7, wherein said head portion of each of said pair of implants is surgical titanium.
17. The **kit** according to Claim 16, wherein said head portion is encased within a coating of medical grade polymer.
18. The **kit** according to Claim 17, wherein said polymer is a silicone.
19. The **kit** according to Claim 7, further comprising a saddle member for supporting a neck portion of...

...said base, each said aperture passing through said base and said reinforcing element.

20. The **kit** according to Claim 19, wherein said base and said reinforcing element are formed of different materials.
21. The **kit** according to Claim 20, wherein said base is formed of medical grade silicone rubber.
22. The **kit** according to Claim 21, wherein said reinforcing element is formed of medical grade polyester.
23. The **kit** according to Claim 22, wherein said polyester is polyethylene terephthalate.

...to Claim 25, wherein said base is formed of medical grade silicone

rubber.

28. A **method** for **surgically correcting** female urinary stress **incontinence** comprising the steps of

(1) providing a pair of implants, each of said implants comprising... ...end disposed on a single side of said head portion;

(2) providing at least one **needle** , said at least one **needle** comprising a cannula and a **trocar** , said cannula being receivable of said **trocar** , said **trocar** being removably disposable within said cannula, said at least one **needle** being bendable to a desired degree of curvature, said first and second ends of said thread being guidingly receivable within said cannula;

(3) incising only the **vaginal** mucosa with an incision about 1 cm in length at the urethro-vesical junction;

(4) introducing said **needle** at the right distal extremity of said **vaginal** incision and non-traumatizingly guiding said **needle** along the symphysis pubis to a first point about 3 cm to the right of a median line at the superior border of the symphysis pubis and passing said **needle** through the skin at this first point;

(5) incising the skin with a cutaneous incision about 0.5 cm in length at said first point;

(6) removing said **trocar** from said **needle** while leaving the cannula in place;

(7) introducing the first end of said thread from one of said pair of implants into said cannula until it protrudes into the **vagina** ;

(8) withdrawing said cannula through the **vagina** ;

(9) introducing said **needle** at the right distal extremity of said **vaginal** incision and non-traumatizingly guiding said **needle** along the symphysis pubis to said incision of step (5);

(10) removing said **trocar** from said **needle** while leaving the cannula in place;

(11) introducing the second end of said thread from said one of said pair of implants into said cannula until it protrudes into the **vagina** ;

(12) withdrawing said cannula through the **vagina** ;

(13) introducing said **needle** at the left distal extremity of said **vaginal** incision and non-traumatizingly guiding said **needle** along the symphysis pubis to a second point about 3 cm to the left of a median line at the superior border of the symphysis pubis and passing said **needle** through the skin at this second point;

(14) incising the skin with a cutaneous incision about 0.5 cm in length at said second point;

(15) removing said **trocar** from said **needle** while leaving the cannula in place;

(16) introducing the first end of said thread from the other of said pair of implants into said cannula until it protrudes into the **vagina** ;

(17) withdrawing said cannula through the **vagina** ;

(18) introducing said **needle** at the left distal extremity of said **vaginal** incision and non-traumatizingly guiding said **needle** along the symphysis pubis to said incision of step (14);

(19) removing said **trocar** from said **needle** while leaving the canula in place;

(20) introducing the second end of said thread from the other of said pair of implants into said cannula until it protrudes into the **vagina** ;

(21) withdrawing said cannula through the **vagina** ;

(22) burying each of said implants under the skin over the symphysis pubis;

(23) adjusting...

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SYSTEMS, METHODS AND DEVICES RELATING TO DELIVERY OF MEDICAL IMPLANTS
SYSTEMES, PROCEDES ET DISPOSITIFS RELATIFS A LA POSE D'IMPLANTS MEDICAUX

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English Abstract
...general overview, an exemplary system includes any number of the following: a delivery device, a **sling assembly** , **guide** members, and connectors that interconnect the above. Embodiments of all the above components and their combinations are disclosed. Methods of using the above system in **suprapubic** , prepubic, transvaginal, trans-obturator and other approaches are also disclosed.

Detailed Description
... medical implant, to an anatomical site in the body of a patient.

Background Information
Urinary **incontinence** occurs in both men and women. Various types of **incontinence** are caused by different conditions and call for different treatments. For example, stress urinary **incontinence** (SUI) is known to be caused by at least two conditions, intrinsic sphincter deficiency (ISD ...

...and, consequently, the patient suffers from urine leakage and/or flow.

One way to treat **incontinence** , both in men and women, is to place a surgical **sling** or suture in the periurethral tissue such as under the bladder neck or the urethra to provide a urethral platform. Placement of the **sling** limits the endopelvis fascia drop while providing compression to the urethral sphincter to improve coaptation. The **sling** may be affixed using a bone anchoring method. Alternatively, a medical professional can use an anchorless approach to stabilize the urethra with a **sling** by placing the **sling** in the periurethral tissue and relying on tissue compression and eventual tissue in-growth to secure the **sling** in position.

Summary of the Invention
The invention addresses deficiencies of the prior art by...

...a preferred embodiment, the device can be used to deliver an implant, such as a **sling** for treating urinary **incontinence** , to a mid-urethral location of a patient. The methods and systems of the invention...

...site. The invention may be employed with any suitable implant configuration, such as any suitable **sling assembly** or sleeve/ **sling** / **guide** tube combination.

In one aspect, the invention features a delivery device including a handle, a...

...The pusher tube and the pushing mechanism can be integrated, for example, into a single **assembly** .
The pushing tube can be connected to the handle of the delivery device in various...

...patient, and a delivery device as described above.

In one embodiment, the implant includes a **sling assembly** having first and second ends.

The **sling assembly** includes a first **guide** attached to the first end and a second **guide** tube attached to the second end, and each of the first and second **guide** tubes are sized for slideably interfitting over a distal end of the shaft. In one...

...tip at the distal end and at least one end of the first and second **guide** tubes is **tapered** to accommodate the conical tip.

The **guide** tubes can be **assembled** in various configurations. In one embodiment, the first and second **guide** tubes are sized for interfitting, alternatively, and one at a time, over the shaft and abutting a distal end of the pusher tube. In this embodiment, the first **guide** tube has proximal and distal ends and attaches at the proximal end to the first end of the **sling assembly** and slideably interfits over the shaft, proximal end first. In another embodiment, the first **guide** tube has proximal and distal ends, attaches at the proximal end to the first end of the **sling assembly** and slideably interfits over the shaft, distal end first.

In another aspect, the invention features a method of delivering an implant such as a **sling** to an anatomical site in the body of the patient. The method includes delivering the **sling** to a mid-urethral position. In this aspect, the method includes slideably interfitting a first **guide** tube attached to a first end of an implant over a distal end and along...

...the distal end of the shaft in a body of a patient, sliding the first **guide** tube off the shaft to deliver a first portion of the implant into the body of the patient, slideably interfitting second **guide** tube attached to a second end of the implant over the distal end and along...

The slideable tubular **sleeve** can **extend** past the base portion of the closed loop connector onto the end of the medical...

...a preferred embodiment, the device can be used to deliver an implant, such as a **sling** for treating urinary **incontinence** , to a mid-urethral location of a patient. The methods and systems of the invention...pairs described below can all be used for attaching a medical implant such as a **sling assembly** to the distal end of a delivery system or delivery system component. The connector pair...

...there between, and an elongated tongue section for spacing the receptacle axially away from the **sling assembly** , a plug connector and compressible to axially snap fitting into the receptacle connector. The plug...

...FIG. I depicts a perspective side view of a delivery device including a handle and **needle** according to an illustrative embodiment of the invention.

FIG. 2 depicts an enlarged perspective side view of the handle and a portion of the **needle** of the device of FIG. 1.

FIG. 3 depicts a perspective side view of the delivery device of FIG. I with a pusher **assembly** incorporated into the device according to an illustrative embodiment of the invention.

FIG. 4 depicts a perspective side view of the pusher **assembly** shown in FIG. 3.

FIG. 5 depicts an enlarged perspective side view of the handle and pusher **assembly** portion of the device shown in FIG. 3.

FIG. 6 depicts a longitudinal cross-sectional view of a pusher **assembly** on a delivery device according to an alternative embodiment of the invention.

FIG. 7A depicts a perspective side view of a delivery device that includes a **guide** tube and a shaft., with the **guide** tube actuated to be in a first position relative to the shaft according to an...

...7B depicts a perspective side view of the delivery device of FIG. 7A where the **guide** tube is actuated to be a second position relative to the shaft.

FIGS. 8A depicts a perspective side view of a delivery device that includes a **guide** tube and a shaft, with the shaft actuated to be in a first position relative to the **guide** tube, according to an alternative embodiment of the invention.

FIGS. 8B depicts a perspective side...

...FIG. 8A with the shaft actuated to be in a second position relative to the **guide** tube.

FIG. 9A depicts a perspective side view of a delivery device according to another...

...along the line
469B "
FIG. 1 OA depicts a perspective side view of an exemplary **guide** tube

according to one
illustrative embodiment of the invention
FIG. I OB depicts a side view of a portion of the **guide** tube of FIG. 1 OA according to an illustrative embodiment of the invention.

FIG. 1 1 depicts a side view of an alternative illustrative embodiment of a portion of a **guide** tube of the general type depicted in FIG. 1 OA.
FIG. 12 depicts a perspective...

...another illustrative embodiment of the invention.

FIG. 19 depicts a top view of an exemplary **sling assembly** that may be employed with the various illustrative delivery devices of the invention.

FIG. 20 depicts a top view of another exemplary **sling assembly** that may be employed with the various illustrative delivery devices of the invention.

FIG. 21 depicts a top view of another exemplary **sling assembly** that may be employed with the various illustrative delivery devices of the invention.

FIG. 22A...

...receptacle connector pair along with components of an implant delivery system including a shaft, a **guide** tube and a **sling assembly** , according to another illustrative embodiment of the invention.

FIG. 42B depicts a side perspective view...
...the invention.

FIG. 63A depicts a delivery system that includes a handle, a shaft, a **guide** tube, a **sling assembly** and connectors according to an illustrative embodiment of the invention.

22 1
FIG. 63B depicts a radial cross-sectional view of the **guide** tube of FIG. 63A along the
line "63B-63B."
FIG. 63C depicts a longitudinal cross...

...with a sleeve end through a loop connector and a slotted receptacle connector, where the **sheath** is in a **retracted** position.

FIG. 66A depicts a perspective side view of interconnection between the delivery device and...

...sectional view of the interconnection between a receptacle connector and a loop connector with a **locking sheath** embodiment.

FIG. 67A depicts a side perspective view of an L-shaped receptacle connector and...

...connector pair of FIG. 67A with the loop and L-shaped receptacle interfitted and the **sheath** located to facilitate **locking** .

FIG. 68 depicts a cross-sectional view of a delivery device including a **guide** tube having connectors for mounting a **sling assembly** shown in perspective, according to an illustrative embodiment of the invention.

FIG. 69 depicts a perspective side view of the components shown in FIG. 68 **assembled** together, according to an illustrative embodiment of the invention.

FIG. 70 depicts a perspective side view of an **assembled** delivery system with two **guide** tubes, a shaft with a handle, a **sling assembly** , and connectors, according to another illustrative embodiment of the invention.

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FIG. 71 depicts a perspective side view of an **assembled** delivery system with two **guide** tubes that are alternative embodiments of the ones shown in FIG. 70, a shaft with a handle, a **sling assembly** , and connectors, according to another illustrative embodiment of the invention.

FIG. 72 depicts a perspective side view of an **assembled** delivery system with two ends of a **sling assembly** attached to two **guide** tubes where each **guide** tube slideably fits over a handled shaft next to a pusher **assembly** , according to one embodiment of the invention.

FIG. 73A depicts a schematic view of the tunneling step, using an optional **guide** tube, in a **suprapubic** approach to delivering a **sling** to an anatomical site, according to illustrative embodiments of the invention.

FIG. 73B depicts a schematic view of interconnection and other steps without using a **guide** tube subsequent to the step shown in FIG. 73A.

FIG. 73C depicts a schematic view of interconnection and other steps using **guide** tubes subsequent to the step shown in FIG. 73A.

FIG. 73D depicts a schematic view...

...or 73 C.

FIG. 73E depicts a schematic view of the final placement of a **sling** to treat urinary **incontinence** .

FIGS. 74 depicts a schematic view of a **suprapubic** delivery approach using the shaft of the type shown in FIG. 14 where one previous...

...in a transvaginal approach where the implant is interconnected to a distal end of a **guide** tube for delivery to an anatomical site in the patient.

24

FIGS. 78A and 78B...

...in a transvaginal approach where the implant is interconnected to a proximal end of a **guide** tube for delivery to an anatomical site in the patient.

FIGS. 79A and 79B depict...

...transvaginal approach where the implant is interconnected to both distal and proximal ends of a **guide** tube for delivery to an anatomical site in the patient.

FIGS. 80A and 80B depict schematic views of steps in a transvaginal approach where the implant is interconnected to two **guide** tubes simultaneously for delivery to an anatomical site in the patient.

FIGS. 8 1 A...

...another illustrative embodiments of the invention.

FIG. 82 depicts a side perspective view of a **sling assembly** with two male **guide** members, and a delivery device, according to an illustrative embodiment of the invention.

FIG. 83 depicts a side perspective view of an alternative embodiment to the male **guide** members of FIG. 82, according to an embodiment of the invention.

FIG. 84A depicts a schematic view of steps in a **suprapubic** ; or prepubic delivery approach using a delivery device including a shaft and a **guide** tube.

FIG. 84B depicts a schematic view of steps in a transvaginal. delivery approach using...
...shown in FIG. 84A.

FIG. 84C depicts a schematic view of steps using the male **guide** members of the general type shown in FIG. 82 subsequent to steps shown in FIG...

...FIG. 85 depicts a side perspective view of an implant delivery system including two female **guide** members, according to an illustrative embodiment of the invention.

FIG. 86A and 86B depict schematic views of steps in a **suprapubic** or prepubic delivery approach using the delivery device of FIG. 85.

FIG. 87A and 87B...85.

Descriptio
25
The invention relates to delivering and placing an implant, such as a **sling** , **mesh** , or suture, for the treatment of urinary **incontinence** , at an anatomical site (such as the periurethral tissue) in the body of a mammal...

...The first section, describes various illustrative delivery devices. The second section describes implants (such as **sling assemblies**) that may be delivered by, without limitation, any of the illustrative delivery devices.

The third...

.Referring now to FIG. 6513, when the sheath 650 is at the retracted position. The **retracted sheath** 650 exposes a slotted connector at the distal. shaft portion 657. In one embodiment, the...

...65A to shield at least the receptacle connector 666. The stopper 662 is deployed to **lock** the **sheath** 650 at the advanced position. An otherwise exposed slot 668 shown in FIG. 65B can...

...portion 686, especially the back edge 688, will not be caught in the tissue during **sling** delivery or adjustment, for example, when the operator has to pull the **sling assembly** 678 back through a tunnel to reposition it. The **sling assembly** 678 needs to be repositioned when the bladder has been punctured during the delivery process. To aid the detection of **bladder puncture** under a cystoscope, the sleeve **assembly** 678, for example, the sleeve 682 or the **mesh sling** (not shown), may be colored (e.g., blue). In use, an operator can delay any cystoscopy until one or both sleeve ends of the **sling assembly** 678 are in one or two tissue tunnels to check for visual signs of the colored **sling assembly** and/or other colored components of the delivery system such as the shaft 652, the sheath 650, or a **guide** tube.

FIG. 66A depicts a sheath 671 that can be used as an alternative to...
...lock the interconnection. In an alternative embodiment, the sheath 671 is located on the sleeve **assembly** , for example, the dilator 680, and can also be manually actuated to slideably shield the...

...plastics such as polytetrafluoroethylene (PTFE) or tetrafluoroethylene (TFE).

FIGS. 67A and 67B depict an alternative **sheath** 690 that automatically **locks** in the connection between two connectors, even before the interconnected devices travel through the patient...

...connector 664 has a loop 676 and is attached to the dilator 680 of the **sling assembly** 678. The loop 676 may be fon-ned from a suturing material. Alternatively, the loop...

...no longer matched up with the entry notch 670 in the receptacle connector 666, the **sheath** 690 **locks** the loop 676 inside the retention slot 672. To unlock the two connectors 664 and...

...view, connectors with applications in associating an implant to the side of one or more **guide** tubes. A delivery device 700 includes a shaft 702 and a **guide** tube 704. The shaft 702 has a distal portion 706 and a proximal portion 708...

...application. The proximal end 708 of the shaft 702 connects to the handle 710. The **guide** tube 704 may function as a dilator tube. In one embodiment, the **guide** tube 704 is separate from and
78
not attached to, the handle 71 0. However other embodiments, the **guide** tube 704 attaches either reversibly or permanently the handle 71 0 through an actuator, such as those described in connection with FIGS. 7A and 7B.

The **guide** tube 704, according to an illustrative embodiment of the invention, is elongated and includes a...

...718 slideably receives the shaft 702 through a proximal opening 720. In alternative embodiments, the **guide** tube 704 may instead include port

721 in the side of the wall 712 for receiving the shaft 702. The illustrative **guide** tube 704 is of a length such that when the shaft 702 resides inside the...

...end 714 to the distal end 716.
According to one feature of the invention, the **guide** tube 704 has first 724a and second 724b connectors axially separated along it. Preferably the...

...and second connectors 724a and 724b are depressions or indentations in the side of the **guide** tube 704 and do not extend into the lumen 718 of the **guide** tube 704. The first and second connectors 724a and 724b may be any suitable connectors...

...second connectors 724a and 724b, in an optional feature, align with each other radically along **guide** tube 704. In another embodiments (not shown), the first connector 724a and second 724b may...

...offset from each others.

With continued reference to FIG. 68, an implant, for example, a **sling assembly** 726 is shown with a **mesh sling** 728 at least partly enveloped in an optional sleeve member 730. The **sling assembly** 726 attaches to the **guide** tube 704 via connectors 732a and 732b, which interfit with connectors 724a and 724b, respectively.

The pre-pubic approach can also be performed with two **needles** with or without **guide** tubes. FIGS. 76A and 76B depict steps of a transvaginal approach according to an illustrative...

...those disclosed herein or in disclosures incorporated by reference.

As in the case of the **suprapubic** and prepubic approaches of FIGS. 73A-73E, the delivery device 840 may be any suitable...

...the procedures of FIGS. 73A-73E, the procedures of FIGS. 76A and 76B employ the **sling assembly** 788. In use, the medical operator interfits or interconnects the **sling assembly** end 796a to the shaft 842, for example, by way of the shaft connector 850 and **sling assembly** connector 798a. Alternatively, in embodiments where the **sling assembly** 788 attaches to dilator tubes, such as the dilator tubes 735a and 735b of FIG...

...843, and introduces the shaft 842 tip 848 first, into a puncture 854 in the **vaginal** wall 784 on one side of the urethra. The operator, using the shaft 842, tunnels...

...on one side of the abdominal skin 780, creating a first tunnel 858 between the **vaginal** puncture 854 and the abdominal puncture 856. Similar to the **suprapubic** ; and prepubic approaches, the shaft 842 (where a dilator tube is not employed) or the...

...surrounding tissue during a cystoscopy.

The operator then separates the shaft connector 850 from the **sling assembly** connector 798a. The operator keeps the **sling assembly** end 796a from slipping back into the abdominal puncture 856 using, for example, a clainp...

...on the contralateral side of the urethra 786 by repeating the above steps with the **sling assembly** end 796b. The same shaft 842 or a second shaft may be used.

After both...

...have not been perforated, the operator then adjusts
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the position and tension in the **sling assembly** 788 to finish the delivery and implanting process as described earlier in connection with the **suprapubic** approach.
Referring now to FIG. 77, in another illustrative transvaginal approach, a distal end 868 of a **guide** tube 866 attaches to an implant such as a **sling assembly** . This approach is essentially the same as the approach of FIGS. 76A and 76B except that the interconnection is between the **sling assembly** and the distal end 868 of the **guide** tube 866. An advantage of this embodiment is that two **guide** tubes may be placed, one on each side of the urethra, using a single shaft. Once both **guide** tubes are placed a single cystoscopy may be performed to verify placement. A pusher **assembly** such as the pusher **assembly** 30 of FIG. 72 may be employed to facilitate removal of the dilator tubes from...

...now to FIG. 78A, in another illustrative transvaginal approach, a proximal end 880 of a **guide** tube 876 attaches to the **sling assembly** end 796a. The interconnection between the **sling assembly** connector 798a and the proximal end connector 882 on the **guide** tube 876 may be

made prior to insertion of the **guide** tube 876 into the body, as shown in FIG. 72, or subsequent to **guide** tube insertion, as shown in FIG. 78A. The delivery device 870 may also include a pusher **assembly** such as that shown in FIG. 72, and as described in connection with FIGS. 3 for axially actuating the **guide** tube 876 off the shaft 842. One example of the **guide** tube 876 is described in connection with FIGS. 63A-63D and 64. Another exemplary **guide** tube is described with respect to FIG. 72 where a proximal end of the **guide** tube is interconnected, for example, through heat bonding, with an end of a **sling assembly**. As in the embodiments, the distal tip 848 of the shaft 842 extends outside the distal end 878 of the **guide** tube 876 for piercing through the tissue. The operator, using the shaft 842 sheathed in the **guide** tube 876, tunnels transvaginally to create the first tunnel 858 as described in connection with FIGS. 76A and 76B.

Referring also to FIG. 78B, if a pusher **assembly** such as the pusher **assembly** 30 with respect to FIG. 72 is employed, the operator actuates in the distal direction to edge enough of the **guide** tube 876 off the shaft 842 so that the operator can grasp the distal end 878 of the **guide** tube 876 by hand or with the assistance of an instrument. Once the **guide** tube 876 is grasped, the operator withdraws the remainder of the shaft 842 from the first tunnel 858 by pulling it out of the **vaginal** puncture 854. With the **guide** tube 876 remaining in the tunnel 858, the operator can clamp its distal end 878...

...slipping back into the tunnel 858. The operator can perform a cystoscopy and remove the **guide** tube 876 at this point (as shown in FIG.

Claim

... claim 1, wherein the pusher tube and the pushing mechanism are integrated into a single **assembly** ,

3 The delivery device of claim 1, wherein the handle includes a first axially extending...

...1 0, wherein the pusher tube and the pushing mechanism are integrated into a single **assembly** ,

12 The delivery device of claim I 0, wherein the handle includes a first axially...

...a medical operator.

19 The delivery system of claim IO, wherein the implant comprises a **sling assembly** having first and second ends.

20 The delivery system'of claim 19, wherein the **sling assembly** includes a first **guide** tube attached to the first end and a second **guide** tube attached to the second end, and each of the first and second **guide** tubes are sized for slideably interfitting over a distal end of the shaft.

21 The...

...tip at the distal end and at least one end of the first and second **guide** tubes is **tapered** to accommodate the conical tip.

22 The delivery system of claim 20, wherein the first and second **guide** tubes are sized for interfitting, alternately, and one at a time, over the shaft and...

...end of the pusher tube.

23 The delivery system of claim 20, wherein the first **guide** tube has proximal and distal ends and attaches at the proximal end to the first end of the **sling assembly** and slideably interfits over the shaft, proximal end first.

24 The delivery system of claim 20, wherein the first **guide** tube has proximal and distal ends, attaches at the proximal end to the first end of the **sling assembly** and slideably interfits over the shaft, distal end first.

25 A method of delivering an...

...anatomical site in a body of a patient, the method comprising,
slideably interfitting a first **guide** tube attached to a first end of an implant over a distal end and along...

...the distal end of the shaft in a body of a patient,
sliding the first **guide** tube off the shaft to deliver a first portion of the implant into the body of the patient,
slideably interfitting a second **guide** tube attached to a second end of

the implant over the
distal end and along...

...of the shaft in the body of the patient, and I 1 sliding the second **guide** tube off the shaft to deliver a second portion of the implant into the body of the patient.

26 The method of claim 25, wherein the implant includes a **sling** for treating urinary
incontinence .

27 The method of claim 25 comprising using a pushing mechanism to slide the first and
second **guide** tubes off the shaft,
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28 The method of claim 25, wherein the first and second **guide** tubes have proximal and distal ends, attach at their respective proximal ends to the **sling** **assembly** , and the method comprises sliding the first and second **guide** tubes, distal end first, over the distal end of the shaft.

29 The method of claim 25, wherein the first and second **guide** tubes have proximal and distal ends, attach at their respective proximal ends to the **sling** **assembly** , and the method comprises sliding the first and second **guide** tubes, proximal end first, over the distal end of the shaft.
30 The method of...

...anatomical site in a body of a patient, the
method comprising,
slideably interfitting a first **guide** tube attached to a first end of an implant over a distal
end and along...

...distal end of the first shaft in a body of a patient, sliding the first **guide** tube off the first shaft to deliver the a first portion of the implant
into the body of the patient,
slideably interfitting a second **guide** tube attached to a second end of the implant over a
distal end and along...

...the second shaft in the body of the patient, and 1 1 sliding the second **guide** tube off the second shaft to deliver a second portion of the 1 2 implant...

...proximal and distal ends and attached to the handle at the proximal end, a first **guide** tube having proximal and distal ends and attaches at the proximal end to a first end of a **sling** **assembly** and slideably interfits over the shaft, proximal end first.

35 A delivery device for delivering...

...in a direction toward a pubic bone of a patient to reduce likelihood of inadvertently **puncturing** internal organs.

39 The delivery **device** of claim 36, wherein the angle relative to the shaft is about 90
degrees.

40...

...in a direction toward a pubic bone of a patient to reduce likelihood of inadvertently **puncturing** internal organs.

57 The delivery **device** of claim 54, wherein the angle relative to the shaft is about 90
degrees.

58...
...to the handle.

68 The delivery system of claim 67., wherein the implant includes a **sling** for treating urinary
incontinence .

69 The delivery system of claim 68, wherein the **sling** is configured for placement at a mid
urethral anatomical site in the body of a...

...The method of claim 87 comprising inserting the shaft into the body of the patient
suprapubically .

89 The method of claim 87 comprising inserting the shaft into the body of the...

...of the patient
transvaginally.

91 - The method of claim 87, wherein the implant includes a **sling** for treating urinary **incontinence** and the method includes positioning the **sling** at a mid-urethral location.

92 A method of delivering an implant to an anatomical...

...The method of claim 92 comprising inserting the shaft into the body of the patient **suprapubically** .
104

94 The method of claim 92 comprising inserting the shaft into the body of ...

...of the patient
transvaginally.

97 The method of claim 92, wherein the implant includes a **sling** for treating urinary **incontinence** and the method includes positioning the **sling** at a mid-urethral location.

98 The method of claim 94, wherein the implant includes a **sling** with first and second ends for treating urinary **incontinence** and the method includes positioning the **sling** in a loop around a mid-urethral location with the ends of the **sling** extending from the mid-urethral location along
an anterior surface of the pubic bone of...

...connector pair of claim 99, wherein the closed loop connector includes a base portion, a **tapered** portion and a loop portion, the base portion

extending from the end of the medical implant to the **tapered** portion, the **tapered** portion **tapering** radially outward and extending axially from the based portion to the loop portion, the loop...

...connector pair of claim 1 0 1, wherein the distal end of the shaft is **tapered** to for interfitting with the **tapered** portion of the closed loop connector. 103. The connector pair of claim 99, wherein the...

...second leg of the slotted connector. 104. The connector pair of claim 103, wherein the **tapered** portion of the closed loop connector is sized to snap fit into and track the...the neck section. 148. The connector pair of claim 143, wherein the implant is a **sling assembly** for treating urinary **incontinence** . 149. A connector pair for attaching a medical implant to a component of a delivery...

...aperture diameter. 150. The connector pair of claim 149, wherein the medical implant is a **sling assembly** for treating urinary **incontinence** . 151. The connector pair of claim 149, wherein the delivery system component is an elongate...

...there between, and an elongated tongue
section for spacing the receptacle axially away from the **sling assembly** ,
a plug connector, located at a distal end of a delivery system component, and compressible...

...the receptacle connector. 159. The connector of claim 158, wherein the medical implant is a **sling assembly** for treating urinary **incontinence** . 160. The connector pair of claim 158, wherein the delivery system component is a shaft...

...expanded conical head. 170. The connector of claim 164, wherein the medical implant is a **sling assembly** for treating urinary **incontinence** . 171.
Theconnectorpairofclaim164,whereinthedeliverysystemcomponentisashaft.
172. The connector pair of claim 164, wherein the delivery system component...

...the receptacle connector. 174. The connector of claim 173, wherein the medical implant is a **sling assembly** for treating urinary **incontinence** . 175. The connector pair of claim 173, wherein the delivery system component is a shaft...

40/3,K/134 (Item 134 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00964642 **Image available**
SURGICAL **INSTRUMENT** KIT **FOR** TREATING **FEMALE URINARY** INCONTINENCE
EQUIPEMENT CHIRURGICAL POUR TRAITER L' INCONTINENCE **URINAIRE CHEZ LA FEMME**
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SURGICAL **INSTRUMENT** KIT **FOR** TREATING **FEMALE URINARY** INCONTINENCE
EQUIPEMENT CHIRURGICAL POUR TRAITER L' INCONTINENCE **URINAIRE CHEZ LA FEMME**
Main International Patent Class: **A61F-002/00**
Fulltext Availability:
Detailed Description
Claims

English Abstract
Described is a **surgical** instrument for **treating** female urinary stress **incontinence** . The instrument includes a first **curved needle** element (10) defining in part a curved shaft having a distal end and a proximal, a **mesh** (12) for implanting into the lower abdomen of a female to provide support to the urethra; a second **curved needle** element (110) having a proximal end and a distal end, and a coupler (112) for simultaneous attachment to the distal end of the first **needle** (10) and the distal end of the second **needle** (110).

French Abstract
L'invention concerne un instrument chirurgical pour traiter l' **incontinence** urinaire a l'effort chez la femme. Cet instrument comprend un premier element (10) d...

Detailed Description

SURGICAL INSTRUMENT **KIT** FOR **TREATING** URINARY **INCONTINENCE**

CROSS REFERENCE TO RELATED APPLICATION

The present invention is a continuation-in-part of co...

...OF THE INVENTION

1. Field of the Invention

The present invention relates generally to a **surgical** instrument and a **method** for **treating** female urinary **incontinence** and in particular to a **needle** and **mesh** configuration for creating a **sling** beneath the urethra.

2. Backaround Discussion

exercise.

SUI may be caused by a functional defect of the tissue or ligaments connecting the **vaginal** wall with the pelvic muscles and pubic bone. Common causes include repetitive straining of the...

...estrogen loss. Such a defect results in an improperly functioning urethra. Unlike other types of **incontinence** , SUI is not a problem of the bladder.

Normally, the urethra, when properly supported by...end and connecting means at the other end to receive, one at a time, two **curved needle** -like elements which are connected at one end to one end of a **mesh** intended to be implanted into the body. In practice, the **mesh** is passed into the body via the **vagina** first at one end and then at the other end at one side and the...

...of the urethra to form a loop around the urethra, located between the urethra and **vaginal** wall. The **mesh** is extended over the pubis and through the abdominal wall and is tightened. The **mesh** ends are cut at the abdominal wall, and the **mesh** is left implanted in the body. This trans- **vaginal** procedure is exemplified by the TVT product sold by the Gynecare franchise of Ethicon Inc., a Johnson & Johnson Company, of Somerville, NJ, USA. In this procedure two 5 mm **needles** pass a PROLENE **mesh** trans- **vaginally** and through the abdomen to create a tension-free support around the mid urethra. United...

...herein by reference in its entirety.

2

An alternate method to treat SUI is the **sling** procedure. In this procedure a **needle** or other **suture** -retrieving **device** is first inserted through the abdomen, above the pubic bone. The **needle** is **guided** behind the pubic bone, through the subrapubic fascia around the urethra, and out of the body through an incision in the anterior **vaginal** wall. At this point sutures are attached to the **needle** (s) and pulled up back through the abdominal cavity, where the sutures are fastened to ...

...incision in the abdomen and inserting a video scope to watch the progress of the **needles** as they pass through the abdominal cavity.

FIGURES 7a-g illustrate alternate embodiments of coupling the **needle** to the **mesh** ; and
FIGURES 8a-i diagrammatically illustrate several surgical steps of a transabdominal method utilizing two **needles** and two **guide needles** according to the
invention to treat SUI
DETAILED DESCRIPTION OF THE INVENTION
Before explaining the method for treating SUI. A
mesh or **tape** is passed through pelvic tissue and positioned between the urethra and **vaginal** wall, creating a supportive **sling** . The **mesh** provides a structure means for tissue ingrowth and thereby provides a newly created body tissue...
...pressure is exerted upon the lower abdomen, such as during a cough or sneeze, the **mesh** provides support to the urethra, allowing it to keep its seal and prevent the unwanted...

...urine.

Referring to Figs. 1 and 2a, in one embodiment the surgical instrument comprises a **needle** -like element 1 0 that attaches to a **mesh** 12. **Needle** element 1 0 defines a certain radius R to perform the surgical procedure discussed herein.

The distal end of **needle** element 1 0 terminates at a conical section 14 having a tip 16. Alternate configurations from the method of implanting the **mesh** as described below.

The proximal end of **needle** 1 0 terminates in an attachment segment 20 that is adapted to mate and lock...

...of a circle in order to follow substantially the profile of the pubis between the **vagina** and the abdominal wall. For the purposes of the
...minimal stresses at this point. The minimal diameter of proximal end 19 is about 4mm.

Needle I 0 is preferably tubular with a circular cross section and is made from a material that is compatible with the human body. Preferably, **needle** 1 0 is made from AISI 303 stainless steel. The surface of shaft 18 may be smooth, preferably polished, to facilitate penetration of the soft tissue. Alternatively, the surface of **needle** 1 0 may have a somewhat rougher surface. A rougher surface those skilled in the art.

Referring to Figs. 2a-d, **mesh** 12 comprises any tissue-compatible synthetic material, or any natural material, including, but not limited PROLENEO polypropylene **mesh** , a **mesh** having a thickness of 0.7 mm and openings of about 1 mm manufactured by...

...and Drug Administration for implantation into the human body. A still further embodiment of the **mesh** 12 is a combination of a synthetic material
7
1 and a natural material 13...

...material 1 1 as shown in Figs. 2b-c. A still further embodiment of the **mesh** 12 includes a combination of synthetic material 1 1 and natural material ...within a generally central portion of the synthetic material 1 1. One advantage of the **mesh** configurations is that natural material 13 is along the center region of **mesh** 12 so that after installation of **mesh** 12, natural material 13 is positioned below the urethra and

eliminates possible erosion issues at the interface of the urethra and **mesh** . Natural material 13 may be connected to the synthetic material I I by means of sewing, a bio-compatible glue, cell culturing techniques or other known means.

Mesh 12 may be of ...and the length would be dependent upon the size of the female undergoing the procedure. **Mesh** 12 may be single or double ply, generally planar in structure, or tubular (Fig. 2d...

...provide additional supporting strength and more surface area on which tissue fibers may attach. Moreover, **mesh** 12 may consist of different types of material, such as a bioabsorbable and non-bioabsorbable material. **Mesh** 12 may also be coated with an antimicrobial additive to prevent or minimize infection and a lubricous coating, for example, a bioabsorbable hydrogel, to facilitate the **mesh** passing through the tissue as discussed below. Preferably, **mesh** 12 is covered by a removal plastic sheath as disclosed in U.S. patent no. 5,899,909. The **mesh** may also be made radio-opaque and/or of a contrasting color to the body tissue to allow for future diagnostic visualization.

In one embodiment **mesh** 12 may be attached to **needle** segment 20 by means of tying, gluing or other suitable attaching means. Preferably, a biocompatible heat shrink tube fixes **mesh** 12 onto **needle** portion 20, Fig. 2a.

In this approach, a **kit** comprising two **needles** 10, attached to a **mesh** 12, at least one coupler and at least one **guide needle** may be distributed for use by multiple surgeon specialists. For example, a gynecologist may prefer the trans- **vaginal** approach and will simply discard the connector and **guide needle** from the **kit** .

On the other hand, a urologist may prefer the trans-abdominal approach and utilize the connector(s) and **guide needle** (s).

Refe rring now to Figs. 6a-h, an alternate embodiment of the invention utilizes the **needle** 1 0 to penetrate the abdominal wall 60 and couple to the **mesh** 12. In this embodiment, the **mesh** 12 is modified to create a connection means for connecting to the distal end of the **needle** 1 0. The connection means is preferably detachable so that when the **mesh** is pulled out of the abdominal wall, the **mesh** may be detached from the **needle** and the **needle** reused to retrieve the other end of the **mesh** . This embodiment allows for the use of a single **needle** for the procedure. This embodiment also allows for the use of a **mesh** constructed, at least in part, of natural materials, which are otherwise not suitable in the...

...due to the inability of the natural material to survive extended periods in inventory.

A **needle** 1 0 with coupling means at the distal end penetrates the abdominal wall 60, anterior...exits the body through an incision having been made in the anterior wall of the **vagina** 50, Fig. 6b. A first 1 1
end of **mesh** 12 attaches to the distal end of **needle** IO via coupling means. The surgeon then retracts **needle** 1 0 back through the pelvic cavity, following the same path created by **needle** I 0, while at the same time causing **mesh** 12 to follow the **needle** , Fig. 4c. The **needle** IO and **mesh** 12 pass through the **vaginal** wall and through the soft tissue on one side of the urethra 54. The **needle** and **mesh** then according to Fig. 4f being passed close to the back of the pubic bone...

...muscle and fascia, and then out the abdominal wall 60 above the pubic bone 56.

Needle 10 disconnects from the first **mesh** end, and the surgeon repeats
the same procedure, but this time passes the **needle** 1 0 on the opposite side of the urethra 54, Figs. 6d-h, to complete the implantation of the **mesh** 12 between the mid urethra and **vaginal** wall.

Referring to Figs. 7a-g, alternate embodiments for connecting the **needle**

1 0 to the **mesh** 12 are disclosed. Figs. 7a-b disclose a coupler 130 having a proximal end 132 configured to accept the **mesh** 12 and a distal end 134 for accepting the distal end 17 of **needle** 1 0. Distal end 17 comprises a contiguous
groove 120 for detachably coupling with coupler...

...spring tabs 136 and 138, each with fingers 140 and 142 for engaging groove 120. **Mesh** 12 is preferably attached to the ... biocompatible glue or other appropriate mechanical fastening means.

The surgeon may simply attach or detach **needle** 1 0 from coupler 130 by depressing spring tabs 136 and 138 forcing fingers 140...
...in or out of coupler 130. Fingers 140 and 142 engage groove 120 to hold

needle 1 0 firmly in place within coupler 130.

Figs. 7c-e illustrate a coupling mechanism...

Claim

1 A **surgical** instrument for **treating** female urinary stress **incontinence** comprising:

a) a **mesh** for implanting into the lower abdomen of a female to provide support to the urethra;

b) a first **curved** **needle** element defining in part a **curved** shaft having

a distal end and a proximal end, the proximal end having means for attaching to the **mesh** ;

c) a second **curved** **needle** element having a proximal end and a distal end; and

d) coupling means for simultaneous attachment to the distal end of the first **needle** and the distal end of the second **needle** .

2 A **surgical** instrument for **treating** female urinary stress **incontinence** comprising:

a) a **mesh** for implanting into the lower abdomen of a female to provide support to the urethra and comprising a first coupling means at both ends of the **mesh** ; and

b) a **curved** **needle** element defining in part a **curved** shaft having a distal end and a proximal end, the distal end having second coupling...

40/3,K/147 (Item 147 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00944863 **Image available**
SURGICAL TOOL
OUTIL CHIRURGICAL
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Application: WO 2002GB1270 ~~20020402~~ (PCT/WO GB0201270)
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AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
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Fulltext Availability:
Detailed Description
Claims

English Abstract
...for introducing a surgical implant into the human body for the treatment of female urinary **incontinence** is provided. The **tool** (1) comprises an **elongate** shaft (4) and implant carrier means. The elongate shaft (4) comprises a handle (2) at...

French Abstract
...un implant chirurgical dans le corps d'un patient humain, pour le traitement de l' **incontinence** urinaire de la femme. L'outil (1) decrit dans cette invention comprend une tige allongee...

Detailed Description
I 'Surgical Tool"
This invention relates to a **surgical** tool for use in the **treatment** of female urinary **incontinence** , along with a surgical implant for insertion by the tool and a related method of treating female urinary **incontinence** .

Urinary **incontinence** affects a large number of women

and, consequently, various approaches have been developed to treat female urinary **incontinence** .

Those skilled in the art will be familiar with approaches ranging from pelvic floor exercises...neck.

This invention is particularly airected to improvement of a known procedure in which a **sling** is positioned loosely under the mid-urethra, commonly

known as TVT (Tension free **vaginal** **Tape**). It is generally understood that this treatment alleviates urinary **incontinence** by occluding the mid-urethra (for example at a time of raised abdominal pressure by coughing or the like).

The **sling** generally comprises a long **mesh** or **tape** and is provided in the body using two large **curved** **needles** which are provided at each end of the **mesh** or **tape** . Each of the **needles** is carried on an insertion tool (which is basically a handle facilitating manipulation of the **needle**). The **mesh** or **tape** is usually made of knitted polypropylene (such as ProleneO). Due to the cutting process used in the manufacture of the **mesh** or **tape** , the **mesh** or **tape** generally has poor finish and thus has rough edges. These rough edges are therefore usually covered with a polythene envelope to aid smooth insertion into the body. Such **slings** , **needles** and insertion tools are described, for example, in W096/06567 and W097/13465.

In use, an incision is made in the anterior **vaginal** wall and the first of the **needles** is passed through the incision, past one side of the urethra, behind the pubic bone, through the rectus sheath and out through the lower anterior abdominal wall.

Likewise, the second **needle** is passed through the same incision in the anterior **vaginal** wall, past the other side of the urethra, behind the pubic bone, through the rectus sheath and out through the lower abdominal wall. The **needles** are separated from their respective insertion tools and removed from the body via the openings made in the lower abdominal wall. The **needles** are removed from the **tape** such that only the **tape** and its polythene envelope are left in the body, passing from a first exit point...

...exit
point in the lower abdominal wall.

Whilst this method is highly effective in treating urinary **incontinence** , the applicant has recognised a number of problems with the tools and method by which the **tape** is inserted in the body. In particular, the **needles** and **tape** are generally provided in a single sterile **package** , with the **tape** attached to the proximal ends of the **needles** . once the **needles** have been passed out through the lower abdominal wall, the **tape** is cut to separate the **needle** from the **tape** . The **needles** are then disposed of. Thus, a new **needle** and **tape** **package** is required for each treatment, making the treatment relatively expensive.

Furthermore, it can he appreciated that the whole **needle** passes out through the lower abdominal wall.

Thus, the insertion tool must follow the **needle** 's path through the body to a significant extent to push the **needle** out through the abdominal wall either entirely or at least sufficiently to allow the **needle** to be pulled by the surgeon from outside the abdominal wall. This may result in the connection between the **needle** and the insertion tool passing into and some way through the body. As the connection between the **needle** and the insertion tool is not smooth, this may cause additional trauma and/or increased risk of infection being introduced into the body.

In addition the **needles** used in the prior art are of substantial ...and in use can lead to increased trauma/damage to body tissues. Such a large **needle** also requires the surgeon to apply greater force to push the **needle** through the body tissues which may cause a further increase in trauma.

According to the...

...for introducing a surgical implant into the human body for the treatment of female urinary **incontinence** , the **tool** comprising an **elongate** shaft and implant carrier means the elongate shaft having a handle at a proximal end...Also according to the present invention, there is provided a method of treating female urinary **incontinence** in which a surgical implant is located in the carrier means of the **tool** during insertion of the **elongate** shaft through the incision in the anterior **vaginal** wall and into and through body tissue. The shaft of the tool ...body while causing the least trauma to the patient. The surgical implant may be a **mesh** or **tape** . The carrier means may be a hollow, recess or cavity which extends along the length of a member, which may be the shaft of the tool, such that the **tape** or **mesh** is retained inside the member along the longitudinal length of the member. ...position, is the implant can be released from the fastening

means.

The release of the **tape** may be implemented as desired.

The tool can then be withdrawn from the body.

Where...

The ends of the **tape** 5 external the abdominal wall 13 are then cut such that they fall just short mounting portion at a distal end 22, the retaining **instrument** comprising an **elongate** shaft 4 which has a semi-blunt point 46 at its distal end and handle...does not require the lower abdominal wall to be punctured to enable release of the **tape** from the tool. This is obviously of considerable advantage to the patient.

In use the...

...of the insertion tool 16. The soft tissue anchor 30 is placed over the semi- **blunt** point 46 of the retaining **instrument** 40 as described above. An **incision** 10 is made in the anterior wall 14 of the **vagina** and the first insertion tool containing the implant 5 and retaining **instrument** 40 is inserted through an **incision** 10 in the anterior of the **vaginal** wall 14 passed on one side of the urethra 11 through the bodily tissue behind...100, the insertion tool 18 can be withdrawn. As the soft tissue anchor 30 is **fixed** in the body the **surgical** implant 5 to which the soft tissue anchor is attached is retained in the body...

...tool 18 can then be removed from the incision 10 in the anterior of the **vaginal** wall 14, the **tape** held in position by the soft tissue anchor 30.

As the insertion tool 18 is withdrawn the **tape** is removed from the cavity 24 of the carrier means 44 by passing the **tape** through the elongate opening 9 in the carrier means 44.

The ...then be removed from the body by retracting it through the incision in the anterior **vaginal** wall 14. ...9 of the carrier means 44 of the insertion tool.

The insertion 10 in the **vaginal** wall can then be closed by **sutures** .

A further embodiment the insertion **tool** is shown in figure 9. Again this embodiment of the insertional tool comprises carrier means...figure 9, the surgical implant 5 is rolled around the shaft 4 of the insertion **tool** such that the **longitudinal** edges 60 of the implant 5 are brought together forming the implant 5 into a...body.

In use an incision 10 is made in the anterior wall 14 of the **vagina** and a first shaft 4 of a first insertional tool with the implant rolled around...

...70, the carrier means is inserted through the incision 10 in the anterior of the **vaginal** wall 14, passed on one side ...the body.

The first insertion tool can then be removed from

the incision in the **vaginal** wall along with the polyethene sleeve 70 which surrounded the surgical implant.

A second insertion...

...the other side of the pubic bone 12 to engage a second end of the **tape** 5 in the retropubic ...be removed from the body by is retracting it through the incision in the anterior **vaginal** wall.

The present invention described herein is advantageous over the **needles** described in the prior art to introduce **surgical** implants used in the **treatment** of female urinary **incontinence** as it does not require all of the insertion tool to follow the **tape** through the abdominal wall.

In the further examples provided the present invention allows placement of...

Claim
... for introducing a surgical implant into the human body for the treatment of female urinary **incontinence** , the **tool** comprising an **elongate** shaft and implant carrier means the elongate shaft having a handle at a proximal end...as claimed in claim 1 wherein
the implant carrier means is a cavity within the **elongate** shaft.

5 A surgical **tool** as claimed in any preceding claim wherein the point at the distal end of the...is of sufficient length to
extend from an incision in the anterior wall of the **vagina** through the body and extend ...the abdominal wall.

18 A surgical tool as claimed in any preceding claim wherein the **elongate** shaft of the surgical **tool** is 20 to 40 cm **long** .
19 A surgical **tool** as claimed in claims 1 to 17 wherein the **elongate** shaft of the surgical **tool** is 6 to 20 cm **long** .

20 A surgical **tool** as claimed in claim 19 wherein the **elongate** shaft of the surgical **tool** is 6 to 15 cm in length.

21 A surgical tool as claimed in any...claimed in claims 23 to 24 wherein the opening extends along the inside of the **curve** of the **elongate** shaft.

26 A surgical **tool** as claimed in any preceding claim further comprising implant securing means.

27 A ...as claimed in claim 26 wherein
the implant securing means comprise one or more plastics **strips** extending around a surgical implant.

28 A surgical tool as claimed in any preceding claim...

...adapted for use with the surgical tool as previously claimed the surgical implant comprising a **tape** , the **tape** being resiliently flat.

30 A surgical implant as claimed in claim 29 wherein the **tape** may be radially confined such that the diameter of the **tape** is less than the width of the **tape** when flat.

31 A surgical implant as claimed in claims 29 or 30 the surgical...

...means are at least one soft tissue anchor.

33 A method of treating female urinary **incontinence** comprising the steps of;
placing one end of an impl ant into a first carrier means such that the implant is radially confined by the carrier means;
inserting a first **tool** comprising an **elongate** shaft and carrier means through an incision in the

anterior **vaginal** wall, past ...of the implant into a second carrier means such that the second end of the **tape** is radially confined by the carrier means;
inserting a second **tool** through the **incision** in the anterior **vaginal** wall, past the other side of the urethra and, behind the pubic bone;
releasing the implant from the carrier means while withdrawing the second **tool** ; and
closing the **incision** .

40/3,K/151 (Item 151 from file: 349)
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00936110 **Image available**
IMPROVED SURGICAL **INSTRUMENT AND** METHOD **FOR** TREATING **FEMALE URINARY** INCONTINENCE
INSTRUMENT CHIRURGICAL AMELIORE ET PROCEDE DE TRAITEMENT DE L' INCONTINENCE **D'URINE CHEZ LA FEMME**

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EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
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SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
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IMPROVED SURGICAL **INSTRUMENT AND** METHOD **FOR** TREATING **FEMALE URINARY** INCONTINENCE
INSTRUMENT CHIRURGICAL AMELIORE ET PROCEDE DE TRAITEMENT DE L' INCONTINENCE **D'URINE CHEZ LA FEMME**

Fulltext Availability:
Detailed Description
Claims

English Abstract
The invention relates to a **surgical** instrument and a **method** for **treating** female urinary **incontinence** . A **tape** (12) or **mesh** is permanently implanted into the body as a support for the urethra. In one embodiment, portions of the **tape** (12) comprise tissue growth factors and adhesive bonding means (14, 16) for attaching portions of the **tape** (12) to the pubic bone. In a further embodiment, portions of the **tape** (12) comprise attachment means (20) for fastening portions of the **tape** (12) to fascia within the pelvic cavity. In both embodiments the **tape** (12) is implanted with a single incision through the **vaginal** wall.

French Abstract
L'invention concerne un instrument chirurgical et un procede de traitement de l' **incontinence** d'urine chez la femme. On implante de facon permanente une **bande** ou un treillis dans le corps de la personne

en guise de soutien de l'uretre. Selon une variante, certaines parties de la **bande** comportent des facteurs de croissance tissulaire et des elements de liaison adhesifs permettant de fixer lesdites parties de **bande** a l'os du pubis, Selon une autre variante, certaines parties de la **bande** comportent des elements de fixation pour le rattachement au fascia a l'interieur de la cavite pelvienne. Dans les deux cas, la **bande** est implantee a la faveur d'une seule incision dans la paroi du **vagin** .

Detailed Description
IMPROVED **SURGICAL** INSTRUMENT AND **METHOD** FOR **TREATING** FEMALE URINARY **INCONTINENCE**
CROSS REFERENCE TO RELATED APPLICATION
This application claims the benefit of earlier-filed United States...

...herein by reference in its entirety.

FIELD OF THE INVENTION
The invention relates to a **surgical** instrument and a- **method** for **treating** female urinary **incontinence** , i.e. the incapacity of controlling the discharge of urine.

BACKGROUND OF THE INVENTION
WO...

...end and connecting means at the other end to receive, one at a time, two **curved needle** -like elements which are connected at one end to one end of a **tape** intended to be implanted into the body. In practice, the **tape** is passed into the body via the **vagina** first at one end and then at the other end at one side and the...
...of the urethra to form a loop around the urethra, located between the urethra and **vaginal** wall. The **tape** is extended over the pubis and through the abdominal wall and is tightened. The **tape** ends are cut at the abdominal wall, and the **tape** is left implanted in the body. U.S. patent no.

lo 5,899,909 is...

...and
method prior art and provides for a safe and effective method of placing a **tape** **mesh** in a **sling** relationship with the urethra.

1 5 SUMMARY OF THE INVENTION
The object of the invention is to provide an improved and simplified **surgery** to **restore** urinary continence.

For this purpose the invention provides a **surgical** instrument for **treating** female urinary **incontinence** of the kind referred to above, comprising a **tape** or **mesh** (hereinafter collectively referred to as " **tape** ") to be permanently implanted into the body as a support for the urethra. In one embodiment, portions of the **tape** comprise tissue growth factors and adhesive bonding means for attaching portions of the **tape** to the pubic bone. In a further embodiment, portions of the **tape** comprise attachment means for fastening portions of the **tape** to fascia within the pelvic cavity.

The invention also provides for a method for treating female urinary **incontinence** comprising the steps of creating an access way to the pelvic cavity via the **vagina** ; passing a **tape** into the body via the access way first passing one end of the **tape** on one side of the urethra; passing the second end of the **tape** on the opposite side of the

urethra to form a loop around the urethra, the **tape** located between urethra and the **vaginal** wall; and attaching the ends of the **tape** to the pubic bone or surrounding fascia. Preferably, in each embodiment the **tape** is left permanently in the body to provide, as an artificial ligament, the
2
reinforcement...

...object of the invention is to provide a surgical instrument and method for implanting a **mesh** to treat **incontinence** that does not require penetration of the abdomen.

An advantage of the invention is that...
...invention.

Claim

A method for treating female urinary **incontinence** comprising the steps of:
creating an access way from the **vagina** to the pelvic cavity;
passing a **tape** having a first end and a second end into the body via the
access way to form a loop around the urethra, the loop located between the
urethra and the **vaginal** wall, and
via the access way, attaching the ends of the **tape** within the pelvic cavity.

2 A method for treating female urinary **incontinence** comprising the steps of:
passing a **tape** having a first end and a second end into the body via the
vagina to form a loop around the urethra, the loop located between the urethra
and the **vaginal** wall, and
1 5 bonding the ends of the **tape** to tissue within the the pubic bone.

3 A method for treating female urinary **incontinence** comprising the steps of:
passing a **tape** having a first end and a second end into the body via the
vagina to form a loop around the urethra, the loop located between the urethra
2o and the **vaginal** wall, and
imbedding the first and second ends of the **tape** to fascia within the pelvic cavity.
10

40/3,K/162 (Item 162 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00906222 **Image available**
SURGICAL **INSTRUMENT AND** METHOD **FOR** TREATING **FEMALE URINARY** INCONTINENCE
INSTRUMENT CHIRURGICAL ET METHODE PERMETTANT DE TRAITER L' INCONTINENCE **D'URINE CHEZ LA FEMME**
Patent Applicant/Assignee:
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Inventor(s):
ULMSTEN Ulf, Ridvagen 18D, S-S-182 35 Danderyd, SE,
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Application: WO 2001US47416 20011108 (PCT/WO US0147416)
Priority Application: US 2000716546 20001120
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SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
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SURGICAL **INSTRUMENT AND** METHOD **FOR** TREATING **FEMALE URINARY** INCONTINENCE
INSTRUMENT CHIRURGICAL ET METHODE PERMETTANT DE TRAITER L' INCONTINENCE **D'URINE CHEZ LA FEMME**
Fulltext Availability:
Detailed Description
Claims

English Abstract
...surgical instrument (Figs 1-3) and a method (Figs 4-11) for treating female urinary **incontinence** . The instrument comprises a handle mechanism (11) and one or two **curved needle** -like elements (21) which are connected at opposite ends of the **tape** (26), which is implanted into the body. These elements can be connected one at a time with the handle and are intended to pass into the body via the **vagina** (28), each **needle** -like element being dimensioned to extend from the inside of the **vaginal** wall, under the pubic bone (31) and to the outside of the abdominal wall. When practicing the method, the **tape** is passed into the body via the **vagina** first at one end and then at the other end at one side and the...

...of the urethra (30) to form a loop around urethra, located between urethra and the **vaginal** wall. The **tape** is extended under the pubis and through the abdominal wall and adjusted. The **tape** ends are cut at the abdominal wall, and the **tape** is left implanted in the body.

French Abstract

L'invention concerne un instrument chirurgical et une methode permettant de traiter l' **incontinence** d'urine chez la femme. Cet instrument comporte un mecanisme de manche, ainsi qu'un ou deux elements courbes de type aiguille relies aux extremites opposees de la **bande** , qui est mise en place dans le corps. Ces elements, qui peuvent etre relies individuellement au manche, sont prevus pour passer dans le corps a travers le **vagin** . Les dimensions des elements de type aiguille permettent a ces derniers de s'etendre depuis l'interieur de la paroi **vaginale** , en passant sous l'os pubien, jusqu'a l'exterieur de la paroi abdominale. Lors de l'application de cette methode, la **bande** est inseree dans le corps en passant par le **vagin** , par une extremite d'abord, puis par l'autre extremite, d'un cote et de...

...boucle autour de l'uretre, laquelle boucle est situee entre l'uretre et la paroi **vaginale** . La **bande** est etendue sous le pubis et a travers la paroi abdominale, puis ajustee. Les extremites de la **bande** sont coupees au niveau de la paroi abdominale, et la **bande** reste en place a l'interieur du corps.

Detailed Description

United States Patent Application For.

SURGICAL INSTRUMENT AND **METHOD** FOR **TREATING** FEMALE URINARY **INCONTINENCE**

CROSS REFERENCE TO RELATED APPLICATION

This application is a continuation-in-part of co-pend...

...by reference herein in its entirety.

FIELD OF THE INVENTION

The invention relates to a **surgical** instrument and a **method** for **treating**
female urinary **incontinence** , that is, the incapacity of controlling the discharge of urine.

BACKGROUND OF THE INVENTION

Urinary **incontinence** may be caused by a defect function in the tissue or
ligaments connecting the **vaginal** wall with the pelvic muscles and pubic bone.

US Patent No. 5,112,344 describes a method for treating female urinary **incontinence** without the necessity of opening the abdomen, which would require extended hospital care. In this method a **tape** is looped around the muscle tissue of the abdomen to either side of urethra to be implanted into the soft tissue between the **vaginal** wall and the abdominal wall extending over pubis and with the ends of the **tape** extending into **vagina** . The **tape** is left in the body in order that fibrous tissue, shall develop around the **tape** , said scar tissue functioning as a supporting ligament in the soft tissue. The **tape** is removed from the body when such scar tissue has developed, which takes

about two....

...the fact that fibrous tissue will not develop sufficiently since the soft tissue between the **vaginal** wall and the abdominal wall is in bad condition.

SUMMARY OF THE INVENTION
The object...

...with regard to restoration of the urinary continence.

For this purpose the invention provides a **surgical** instrument for **treating** female urinary **in**continence of the kind referred to above, comprising a shank, a handle at one end of said shank, a **tape** to be permanently implanted into the body as a loop around the urethra, two **curved needle** -like elements which are each connected to opposite ends of the **tape** , and means on said shank and each of said elements for exchangeable connection of the...

...other end a curved end portion dimensioned to extend from the inside surface of the **vaginal** wall and pass in front of the pubic bone to the outside of the abdominal wall.

Claim

I A **Surgical** instrument for **treating** female urinary **incontinence** , comprising

a) a **tape** for implanting into the lower abdomen of a female to provide support to the urethra; and

b) a **curved** **needle** -like element having a proximal end and a distal end

and attached to the **tape** , the **needle** -like element dimensioned to pass the **tape** from an access in the **vaginal** wall, under the pubic bone and to the outside of the abdominal wall.

1 0

2 The surgical instrument of claim I wherein said **needle** -like element is

curved over substantially a half of a circle.

3 The surgical instrument of claim I wherein said **needle** -like element **tapers** 1 5 towards the distal end.

4 The surgical instrument of claim 1 wherein the...

...wherein the distal end is blunt.

6 The surgical instrument of claim 1 wherein the **tape** is perforated for growth of fibroblasts thereinto.

7 The surgical instrument of claim I wherein the **tape** is coated with a fibroblast stimulating material.

8 The surgical instrument as in claim 1 wherein the **tape** is made of polypropylene.

9 The surgical instrument of claim 1 wherein the **tape** comprises a **netting** .

10 The surgical instrument of claim 1, further comprising a thin plastic sheath enclosing the **tape** .

9

. The surgical instrument of claim IO wherein said sheath is made of polyethylene.

12 The surgical Instrument of claim IO wherein the sheath has a perforation line at the **longitudinal** center thereof.

13 The surgical **instrument** of claim IO wherein the sheath comprises two halves having adjacent ends overlapping each other...

...wherein a visible marking is provided

on the sheath at the longitudinal center thereof

a **tape** to be permanently implanted into the body as a loop around

1 5 urethra,

two **curved** **needle** -like elements which are each connected at one end thereof to one end and the other of said **tape** , and

means on said shank and each of said elements for exchangeable connection of the...

...other end a curved end portion dimensioned to extend from the inside surface of the **vaginal** wall over the back of the pubic bone to the outside of the abdominal wall.

15 A method for treating female urinary **incontinence** comprising the steps of:
passing a **tape** into the body via the **vagina** first at one end thereof and
then at the other end thereof at one side...
...to form a loop around the urethra, the loop located between the urethra and the **vaginal** wall,
extending said **tape** under the pubic bone and through the abdominal wall,
the ends of the **tape** being available outside the abdominal wall,
adjusting said **strap** at said ends, and
leaving the **tape** implanted in the body.
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40/3,K/171 (Item 171 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00892437 **Image available**
SURGICAL APPARATUS AND METHODS FOR DELIVERY OF A SLING **IN THE TREATMENT OF FEMALE URINARY** INCONTINENCE
APPAREIL CHIRURGICAL ET METHODES D'ACHEMINEMENT D'UNE FRONDE DANS LE TRAITEMENT DE L' INCONTINENCE **URINAIRE CHEZ LA FEMME**
Patent Applicant/Assignee:
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EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK
SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
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SURGICAL APPARATUS AND METHODS FOR DELIVERY OF A SLING **IN THE TREATMENT OF FEMALE URINARY** INCONTINENCE
APPAREIL CHIRURGICAL ET METHODES D'ACHEMINEMENT D'UNE FRONDE DANS LE TRAITEMENT DE L' INCONTINENCE **URINAIRE CHEZ LA FEMME**
Main International Patent Class: **A61F-002/00**
Fulltext Availability:
Detailed Description
Claims

English Abstract
Surgical apparatus (10) for **treating** female stress urinary **incontinence** include a pair of **curved** delivery **needles** (12a, 12b), each defining a distal end and a proximal end and adapted to be...

...either side of the bladder neck so as to define a delivery path for a **tape** (64) which may be removably attached to the proximal ends of the delivery **needles** (12a, 12b) through the **vagina** for implantation into the abdomen to provide support for the urethra. A pair of curved...

...sheaths (46), each adapted to be inserted into the abdomen around one of the delivery **needles** (12a, 12b), allow withdrawal of the delivery

needles (12a, 12b) from the abdomen such that the **tape** (64) is conducted along the delivery path. In the preferred embodiment, the delivery **needles** (12a, 12b) also allows simultaneous introduction of a local anesthetic into the abdomenal tissues. Methods for treatment of stress urinary **incontinence** utilizing the surgical apparatus (10) are also disclosed.

French Abstract

L'invention concerne un appareil chirurgical qui est destine au traitement de l' **incontinence** urinaire a l'effort chez la femme et qui comprend deux aiguilles d'acheminement courbees...

...des cotes du col vesical, de maniere a definir une voie d'acheminement d'une **bande** . On peut attacher celle-ci de maniere amovible aux extremites proximales des aiguilles d'acheminement a travers le **vagin** en vue de son implantation dans l'abdomen afin d'engendrer un support a l ...

...d'acheminement, permettent le retrait desdites aiguilles de l'abdomen, de telle maniere que la **bande** est amenee le long de la voie d'acheminement. Dans un mode de realisation prefere...

...local dans les tissus abdominaux. Cette invention concerne egalement des methodes de traitement de l' **incontinence** urinaire a l'effort utilisant cet appareil chirurgical.

Detailed Description

SURGICAL APPARATUS AND METHODS FOR DELIVERY OF A **SLING** IN THE TREATMENT OF FEMALE URINARY **INCONTINENCE**

Reference to Related Applications

This application claims the benefit of prior copending U.S. Provisional ...

...health care,
and in particular, to the treatment of a certain type of u rinary **incontinence** in human beings. More specifically, this invention relates to surgical apparatus and 1 0 methods for treating stress urinary **incontinence** in human females.

Back-ground of The Invention

Many women suffer from leakage of urine...

...sneeze or engage in various types of physical exercise. This condition is called stress urinary **incontinence** ("SUl") and is related to weakness of the muscles 1 5 within the pelvis that...

...SUI may be caused by a functional defect of the tissue or ligaments connecting the
vaginal wall with the pelvic muscles and pubic bone. Common contributory
factors include repetitive straining of...

...Such a defect results in an improperly
functioning urethra, but unlike other types of urinary **incontinence** , SUI is. not a problem of the urinary bladder.
Non-operative treatment options for patients...

...described in the

medical literature, the introduction into the abdominal cavity of a pubovaginal 94 **sling** " has emerged in the past decade as the most effective. In this surgical procedure, a **tape** -like material, shaped like a flat **ribbon** , is passed through pelvic tissue and is positioned around the urethra and the bladder neck, forming a loop located between the urethra and. the **vaginal** wall and thereby creating: a supportive " **hammock** " or **sling** effect. The **tape** is extended over the pubis and through the abdominal wall and is tightened, after which the surplus **tape** is cut and removed, and the **tape** is left implanted in the patient's abdominal cavity.

The **tape** provides a structure means for tissue ingrowth and thereby provides a newly created body tissue...

...pressure is exerted upon the lower abdomen, such as during a cough or sneeze, the **sling** provides support to the urethra, allowing it to keep its seal and prevent
the unwanted discharge of urine,
Three sources for **sling** materials are available: autologous fascia (a muscle cover that is obtained from the patient's...

...but which may be associated with infectious and immunological side effects) and non-biological synthetic **tapes** .

By using a synthetic material, there is no need for surgical retrieval of autologous fascia...

...that was recently developed in Sweden is
.25 used. In this procedure, a woven synthetic **tape** material, fabricated of
polypropylene **mesh** and initially protected with a plastic cover that is subsequently removed, is implanted around the urethra via a small **vaginal** incision, and is delivered into both sides of the pelvis through two tiny incisions in the lower abdomen. This outpatient surgery is termed Tension free **Vaginal Tape** ("TVT") and can be accomplished with local anesthesia and intravenous sedation, thus making it very...

...surgeons for many reasons, not the least of which is that the tension of the **tape** can be adjusted by the surgeon based upon feedback provided by the patient.
The main...

...this TVT procedure is the
use of two relatively thick, elongated pointed shafts (known as " **trocars** ") that are introduced seriatim into the pelvis through the **vagina** in order to deliver the 1 0 synthetic **tape** , each end of which is initially attached to one of the **trocars** . The insertion of these sizeable **trocars** is inherently a "blind" procedure and it can therefore lead to injuries to pelvic structures...

Claim

1. An **assembly** for delivery of a **tape** into the abdomen of a human female through the **vagina** to serve as a pubovaginal **sling** in the treatment of
stress urinary **incontinence** , said **assembly** comprising
a pair of **curved** substantially rigid delivery **needles** adapted for bilateral insertion into the abdomen of a human female for placement on either side of the bladder neck adjacent the urethra, the delivery **needles** together
defining a delivery path for said **tape** ;
means for removable attachment of each one of said pair of delivery **needles** to one end of said **tape** introduced through the **vagina** ; and
a pair of curved tubular substantially flexible delivery sheaths, each one of said pair...

...disposed in the interiorthereof and adapted to removably receive one of said pair of delivery **needles** such that the delivery sheaths are situated along said delivery
1 5 path,
whereby each one of said pair of delivery **needles** may be withdrawn from the
abdomen through said delivery sheath passageway and may thereby conduct one end of said **tape** - from the **vagina** and through said delivery sheath
passageway, and thereby position said **tape** along said delivery path.

2 An **assembly** according to claim 1, wherein each one of said pair of delivery **needles** further comprises a distal **needle** end and a proximal **needle** end terminating in a **needle** tip, and wherein said attachment means comprises a thread-like material and means disposed at said proximal **needle** end adjacent said **needle** tip for removably engaging said thread-like material.

3 An **assembly** according to claim 2 wherein said attachment means further comprises means disposed at both ends of said **tape** for removably
receiving said thread-like material.

4 An **assembly** according to claim 3 wherein said **tape** is initially provided with a removable covering, and wherein said receiving means is disposed at the respective ends of said covering.
5 An **assembly** according to claim 4 wherein each one of said pair of delivery sheaths further comprises...

...sheath opening in fluid communication with said delivery sheath passageway, whereby each end of said **tape** is conducted through one of said delivery sheath passageways from said 1 0 proximal sheath end towards said distal sheath end.

6 An **assembly** according to claims 1-5 further comprising means for infusion of a local anesthetic into the abdomen through each one of said pair of delivery **needles** .

7 An **assembly** according to claim 6, wherein each one of said pair of delivery **needles** is hollow and further comprises a **needle** body defining a **needle** body passageway disposed in the interior thereof, a

distal **needle** end comprising
a distal **needle** opening in fluid communication with said **needle** body passageway, and a plurality of spaced circumferential **needle** openings disposed
along substantially the entire length of said **needle** body, each@ of said
circumferential **needle** openings also in fluid communication with said **needle** body passageway, and wherein said infusion means comprises means disposed at said distal **needle** end of each one of said pair of delivery **needles** for
removably connecting the respective **needle** bodies to a source of local anesthetic through said distal **needle** end, such that a charge of local anesthetic
may be conveyed into each said **needle** body from said source of local anesthetic through said **needle** body passageway and may be discharged into the abdomen from each said **needle** body through said circumferential **needle** openings.

8 An **assembly** according to claim 7 wherein said removable connection means comprises a Luer lock disposed within said distal **needle** opening, and
wherein said source of local anesthetic comprises a syringe in fluid communication with said Luer lock and containing a charge of said local anesthetic.

9 An **assembly** according to claim 8 wherein said local anesthetic comprises a mixture comprising substantially equal parts of a long term local anesthetic and a short term local anesthetic.
10 An **assembly** for delivery of a **tape** into the abdomen of a human female through the **vagina** to serve as a pubovaginal **sling** in the treatment of
stress urinary **incontinence** , said **assembly** comprising .
a pair of **curved** substantially rigid delivery **needles** adapted for bilateral insertion into the abdomen of a human female for placement on either side of the bladder neck adjacent the urethra, the delivery **needles** together
defining a delivery path for said **tape** ;
means for removable attachment of each one of said pair of delivery **needles** to one end of said **tape** introduced through the **vagina** ;
means for infusion of a local anesthetic into the abdomen through each one of said pair of delivery **needles** ; and
a pairof **curvedtubularsubstantiallyflexibledeliverysheaths** , each one of said pair of delivery sheaths defining a delivery sheath@ passageway disposed in the interior thereof and adapted to removably receive one of said pair of delivery **needles** such that the delivery sheaths are situated along said delivery
path ,
whereby each one of said pair of delivery **needles** may be withdrawn from the
abdomen through said delivery sheath passageway and may thereby conduct one end of said **tape** from the **vagina** and through said delivery sheath passageway, and thereby position said **tape** along said delivery path.
1 1. An **assembly** according to claim IO wherein each one of said pair of delivery **needles** comprises a **needle** body defining a **needle** body passageway disposed in the interior thereof, a distal **needle** end comprising a distal **needle** opening in fluid communication with said

needle body passageway, a proximal **needle** end terminating in a **needle** tip, and a plurality of spaced circumferential **needle** openingso disposed along substantially the entire length of said **needle** body, each of said circumferential **needle** openings also in fluid communication with said **needle** body passageway, wherein said attachment means comprises a thread-like material and means disposed at said proximal **needle** end adjacent said **needle** tip for removably engaging said thread-like material, and wherein said infusion means comprises means disposed at said distal **needle** end of each one of said pair of delivery **needles** for removably connecting the respective **needle** bodies to a source of local anesthetic through said distal **needle** end, such that a charge of local anesthetic may be conveyed into each said **needle** 5 body from said source of local anesthetic through said **needle** body passageway and may be discharged into the abdomen from each said **needle** body through said circumferential **needle** openings.
12 An **assembly** according to claim I 1 wherein said attachment means further comprises means disposed at both ends of said **tape** for removably
receiving said thread-like material.

13 An **assembly** according to claim 12 wherein said **tape** is initially provided with a removable covering, and wherein said receiving means is disposed at the respective ends of said covering.

14 An **assembly** according to claim 13 wherein each one of said pair of delivery sheaths further comprises...

...sheath opening in fluid communication with said delivery sheath passageway, whereby each end of said **tape** is conducted through said delivery sheath passageway from said proximal sheath end towards said distal sheath end.

15 An **assembly** according to claim 14 wherein said removable connection means comprises a Luer lock disposed within said distal **needle**
opening, andwhereinsaidsourceoflocalanestheticcomprisesasyringeinfluid communication with said Luer lock and containing a charge of said local anesthetic.

16 An **assembly** according to claim 15 wherein said local anesthetic comprises a mixture comprising substantially equal parts of a long term local anesthetic and a short term local anesthetic.

17 An **assembly** for delivery of a **tape** into the abdomen of a human female through the **vagina** to serve as a pubovaginal **sling** in the treatment of
stress urinary **incontinence** , said **assembly** comprising
a pair of **curved** hollow substantially rigid delivery **needles** adapted 1 5 for bilateral insertion into the abdomen of a human female for placement on either side of the bladder neck adjacent the urethra7 the delivery **needles** together defining a delivery path for said **tape** , each one of said pair of delivery **needles** comprising a **needle** body defining a **needle** body passageway disposed in the interior thereof, a distal **needle** end comprising a distal **needle** opening in fluid communication with said **needle** body passageway, a proximal **needle** end terminating in a **needle** tip, and a plurality of spaced circumferential **needle** openings disposed along substantially the entire length of said

needle body, each of said circumferential **needle** openings also in fluid communication with
said **needle** body passageway;
means for removable attachment of each one of said pair of delivery **needles** to one end of said **tape** introduced through the **vagina** , said attachment means comprising a thread-like material, means disposed at said
proximal **needle** end adjacent said **needle** tip for removably engaging said
thread-like material and means disposed at both ends of said **tape** for removably
receiving said thread-like material;
means disposed at said distal **needle** end of each one of said pair of delivery **needles** for removably connecting the respective **needle** bodies to a source of local anesthetic through said disial **needle** end, such that a charge of local anesthetic may be conveyed into each said **needle** body from said sou'rce
of local anesthetic through said **needle** body passageway and may be discharged into the abdomen from each said **needle** body through said circumferential **needle** openings; and
I 0 a pair of curved tubularsubstantiallyflexible delivery sheaths, each one of said...

...pair of delivery sheaths being adapted to removably receive one of said pair of delivery **needles** within said delivery sheath passageway such that the delivery sheaths are situated along said delivery path, whereby each one of said pair of delivery
needles may be withdrawn from the abdomen through said delivery sheath passageway and may thereby conduct one end of said **tape** from the **vagina** and through said delivery sheath Oassagewayfrom said proximal sheath end towards said distal sheath end, and thereby position said **tape** along said delivery path.

19 An **assembly** according to claim 18 wherein said **tape** is initially provided with a removable covering, and wherein said receiving means is disposed at the respective end&of said covering.

20 An **assembly** according to claim 19 wherein said removable connection means comprises a Luer lock disposed within said distal **needle** opening, and wherein said source of local anesthetic comprises a syringe in fluid
communication with said Luer lock and containing a charge of said local anesthetic.

21 An **assembly** according to claim 20 wherein said local anesthetic comprises a mixture comprising substantially equal parts...
...anesthetic and a short term local anesthetic.

22 A method for treating female stress urinary **incontinence** comprising the steps of:
providing an apparatus comprising a pair of **curved** delivery
needles , each delivery **needle** defining a distal **needle** end and a proximal **needle** end, a **tape** for delivery into the abdomen of a human patient to serve as a pubovaginal **sling** , means for attaching the proximal **needle** end of each delivery **needle** to one end of said **tape** , and a pair of curved tubular delivery sheaths, each delivery sheath defining a delivery sheath passageway disposed therein and adapted to

receive therethrough one of said pair of delivery **needles** ;
inserting said delivery **needles** bilaterally into the abdomen of the
1 5 patient in the vicinity of the retropubic space and locating said
delivery **needles** on either side of bladder neck adjacent-the urethra,
such that said delivery
needles together define a **tape** delivery path;
advancing one of said pair of delivery sheaths over each one of
said pair of delivery **needles** such that each one of said pair of
delivery **needles** is received within a delivery sheath passageway and
such that said delivery
sheaths are situated along said delivery path;
introducing said **tape** into the body of the patient via the **vagina** and
attaching each respective end of said **tape** to one of said delivery
needles via
said attachment means;
withdrawing each one of said pair of delivery **needles** from the
abdomen of the patient through a respective delivery sheath passageway
and thereby conducting each end of said **tape** through a respective
delivery sheath such that said **tape** is positioned along said delivery
path on opposite sides of the
urethra;
withdrawing each one of said pair of delivery sheaths from the
abdomen of the patient; and
leaving said **tape** implanted in the body thereby to form a
pubovaginal **sling** .

23 A method according to claim 22 further comprising, prior to said
insertion step, the step of making a longitudinal incision in the
anterior **vaginal** wall of the patient adjacent the bladder neck at
substantially the midpoint of the urethra, and wherein prior to said
introducing step, said proximal **needle** ends extend into the **vagina**
through said anterior wall incision.
24 A method according to claim 23 further comprising, between the two
withdrawing steps, the step of detaching each respective end of said
tape from a respective one of said pair of delivery **needles** .

25 A method according to claims 21-24 wherein said apparatus further
comprises means for...

...anesthetic into the abdomen of the patient through each one of said pair
of delivery **needles** , and wherein said method further comprises, during
said insertion step, the step of infusing a...

...anesthetic into the abdomen of the patient through each one of said pair
of delivery **needles** .

26 A method according to claim 25 wherein said **tape** is initially
provided
with a removable covering, wherein said attachment means comprises means
disposed at...

...ends of said covering for removably attaching each end of said covering
to the proximal **needle** end of each delivery **needle** , and wherein said
method further comprises, prior to said leaving step, the step of
removing said covering from said **tape** .

27 A method for delivery of a **tape** into the abdomen of a human female

patient through the **vagina** to serve as a pubovaginal **sling** in the treatment of
stress urinary **incontinence** , said method comprising the steps of
providing an apparatus - comprising a pair of **curved** delivery **needles** , each delivery **needle** defining a distal **needle** end and a proximal **needle** end, means for attaching the proximal **needle** end of each delivery **needle** to one end of said **tape** , and a pair of curved tubular delivery sheaths, each delivery sheath defining a delivery sheath passageway disposed therein and adapted to
receive therethrough one of said pair of delivery **needles** ;
inserting said delivery **needles** bilaterally into the abdomen of the patient in the vicinity of the retropubic space and locating said delivery **needles** 0 on either side of bladder neck adjacent the urethra, such that said delivery
needles together define a **tape** delivery path;
advancing one of said pair of delivery sheaths over each one of said pair of delivery **needles** such that each one of said pair of delivery **needles** is received within a delivery sheath passageway and such that said delivery
5 sheaths are situated along said delivery path;
introducing said **tape** into the body of the patient via the **vagina** and attaching each respective end of said **tape** to one of said delivery **needles** via
said attachment means;
withdrawing each one of said pair of delivery **needles** from the abdomen of the patient through a respective delivery sheath passageway and thereby conducting each end of said **tape** through a respective delivery sheath such that said **tape** is positioned along said delivery path on opposite sides of the
urethra;
detaching each respective end of said **tape** from a respective one of said pair of delivery **needles** ;
withdrawing each one of said pair of delivery sheaths from the abdomen of the patient; and
leaving said **tape** implanted in the body thereby to form a pubovaginal **sling** .

28 A method according to claim 27 further comprising, prior to said insertion step, the step of making a longitudinal incision in the anterior **vaginal** wall of the patient adjacent the bladder neck at substantially the midpoint of the urethra, and wherein prior to said introducing step, said proximal **needle** ends extend into the **vagina** through said anterior wall incision.

29 A method according to claim 28 wherein said apparatus...

...anesthetic into the abdomen of the patient through each one of said pair of delivery **needles** , and wherein said method further comprises, during said insertion step, the step of infusing a...

...the abdomen of the patient through each -one I 0 of said pair of delivery **needles** .

30 A method according to claim 29 wherein said **tape** is initially provided
with a removable covering, wherein said attachment means comprises means disposed at...

...ends of said covering for removably attaching each end of said covering to the proximal **needle** end of each delivery **needle** , and 1 5 wherein said method further comprises, prior to said leaving step, the step of removing said covering from said **tape** .

31 In a method for treatment of stress urinary **incontinence** , said method

comprising the steps of introducing a **tape** carrying a removable covering into the abdomen of a human female patient through the **vagina** , positioning said **tape** on either side of the urethra, removing said cover from said **tape** and leaving the **tape** in the body to form a **sling** around the urethra, the improvement comprising

the steps of:

providing an apparatus comprising a pair of **curved** delivery **needles** , each delivery **needle** defining a distal **needle** end and a proximal **needle** end, means for attaching the proximal **needle** end of each delivery **needle** to one end of said covering, means for infusion of a local anesthetic into the abdomen of the patient through each one of said pair of delivery **needles** , and a pair of **curved** tubular delivery sheaths, each delivery sheath defining a delivery sheath passageway disposed therein and adapted to receive therethrough one of said pair of delivery **needles** ;

making a longitudinal incision in the anterior **vaginal** wall of the patient adjacent the bladder neck at substantially the midpoint of the urethra;

inserting said delivery **needles** bilaterally into the abdomen of the patient in the vicinity of the retropubic space and locating said delivery **needles** on either side of bladder neck adjacent the urethra, such that said proximal **needle** ends extend into the **vagina** through said anterior wall incision, and such that said delivery **needles** together define a **tape** delivery path, while infusing a charge of said local anesthetic into the abdomen of the patient through each one of said pair of delivery **needles** ;

advancing one of said pair of delivery sheaths over each one of said pair of delivery **needles** such that each one of said pair of delivery **needles** is received within a delivery sheath passageway and such that said delivery

1 5 sheaths are situated along said delivery path;

introducing said **tape** into the body of the patient via the **vagina** and attaching each respective end of said **tape** to one of said delivery **needles** via

said attachment means;

withdrawing each one of said pair of delivery **needles** from the abdomen of the patient through a respective delivery sheath passageway and thereby conducting each end of said **tape** through a respective delivery sheath such that said **tape** is positioned along said delivery path on opposite sides of the

urethra;

detaching each respective end of said **tape** from a respective one of said pair of delivery **needles** ; and

withdrawing each one of said pair of delivery sheaths from the abdomen of the...

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00843334 **Image available**
FEMALE INCONTINENCE **PREVENTION DEVICE INSERTION TOOL**
OUTIL D'INSERTION POUR DISPOSITIF DE PREVENTION DE L' INCONTINENCE **FEMININE**

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FEMALE INCONTINENCE **PREVENTION DEVICE INSERTION TOOL**
OUTIL D'INSERTION POUR DISPOSITIF DE PREVENTION DE L' INCONTINENCE **FEMININE**

Main International Patent Class: **A61F-002/00**
Fulltext Availability:
Detailed Description
Claims

English Abstract
...insertion tool (10) for inserting intra-urethral devices (40). The insertion tool (10) includes a **stylet** (14) and a body (12) having an over-insertion guard (18). The **stylet** (14) configured to receive an intra-urethral device (40) and to be inserted into a...

...location for gripping the device (40) and the guard (18) preventing over-insertion of the **stylet** (14).

French Abstract
...10) pour mise en place de dispositifs intra-uretraux (40). Cet outil (10) comprend un **stylet** (14) et un corps (12) muni d'une protection? (inverted question mark) (18) empechant une sur-insertion. Le **stylet** (14) est concu pour recevoir un dispositif intra-uretral (40) et pour etre insere dans...

...de tenir le dispositif (40) cependant que la protection (18) empeche une sur-insertion du **stylet** (14).

Detailed Description

FEMALE **INCONTINENCE** PREVENTION DEVICE INSERTION TOOL

FIELD OF INVENTION

The present invention relates generally to an apparatus and method for inserting an **elongated device** , and more particularly to an apparatus and method for insertion an intra-urethral device having a retention structure.

BACKGROUND OF INVENTION

Many adults suffer urinary **incontinence** although urinary **incontinence** is more common in women than men. The increased frequency in women is due primarily to the laxity of the bladder support structures resulting from pregnancy and aging. **Surgical correction** is possible in some cases, but surgery is invasive, costly and dangerous.

Incontinence prevention devices, including catheters, plugs and other related devices, typically offer a less invasive solution...

...from the insertion tool can be difficult.

Given the aged nature of many suffering from **incontinence** , the insertion process can be made even more difficult due to unsteady hands. The urethral...

...need exists for an insertion tool that allows for simple one-handed operation.

In addition, **stylets** are used to collapse the urethral devices' retention structures for insertion into the urethra. The retention structures can include loops, pigtails, balloons, Malecots or other related structures. The **stylet** can damage or even puncture the bladder if the **stylet** is over-inserted. Current insertion tools using **stylets** do not provide a mechanism to limit the possibility for such damage. Therefore, a need...

...orientation within the bladder and/or urethra for effectiveness. The removal of such devices from **stylets** frequently results in the rotation of the devices because of the retention structures frequently found...

...to cause rotation because of the torque produced when the structures are collapsed by the **stylets** for insertion, The combination of the rotation and the inability for many to watch the...

...present invention provides an apparatus for insertion of a urethral device having a body, a **stylet** , and a guard to prevent over-insertion of the **stylet** into a urethra. The body may be configured to include a handle. The **stylet** is secured to the body. The guard abuts the tissue external to the meatus to...

...plunger may be provided.

The plunger adapted to remove the intra-urethral device from the **stylet** . The plunger may be

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configured to prevent the intra-urethral device from rotating around the **stylet** during removal of the intra-urethral device from the **stylet** . When the body includes a handle, the handle and the plunger are typically configured to...

...provided to prevent the rotation of the intra-urethral device during removal.

In use, the **stylet** is inserted into the intra-urethral device, typically through a lumen at the proximal end of the intra-urethral device. The **stylet** reduces the diameter of the retention structure to permit insertion into the urethra. Gripping the...

...through the urethra into the urinary bladder. The intraurethral device is then removed from the **stylet** . When the insertion tool includes a plunger, the intra-urethral device is removed by depressing...

...urethral device; I
Fig. 4B illustrates a side view of an insertion tool having its **stylet** inserted into the **incontinence** prevention device thereby configuring the intra-urethral device for insertion
into a urethra; and
Fig. 4C illustrates a side view of an **incontinence** prevention device insertion tool having the intra-urethral device being pushed from the **stylet** with the plunger to reconfigure
3
the intra-urethral device to an orientation for maintaining...

...urethral devices.

The invention is described in the context of an insertion tool for an **incontinence** prevention device. The appended claims are not intended to be limited to any specific example accordance with the present invention. Insertion tool 10 includes a body 12, a **stylet** 14, an over-insertion guard 18 and an optional plunger **assembly** 16. Body 12 is typically composed of a polymeric material, such as polyurethane, polyethylene, polyinfide...

...is generally configured to allow a user to hold onto body 12 while depressing plunger **assembly** 16 to insert the intra-urethral device. **Stylet** 14 is secured to body 12 in a configuration allowing the insertion of the **stylet** into the intraurethral device, which is then inserted into a users urethra. **Stylet** 14 is composed of a material, typically a metal wire, having sufficient rigidity to facilitate the insertion of intraurethral device into the urethra. Thus, **stylet** 14 is typically configured to be received within a lumen of an intra-urethral device. Plunger **assembly** 16 is slidably secured to body 12 and includes a pushing element 26, discussed below, slidably disposed about **stylet** 14. Guard
4
is typically integral with body 12 and typically formed from the same...

...of a different material attached to body 12. Guard 18 is typically configured relative to **stylet** 14 to prevent the over-insertion of **stylet** 14 into the urethra and/or bladder.

Figs. 2 and 3 illustrate a side and...

...Frictional surface 24 may include ridges or depressions, as shown in Figs. 2 and 3. **Stylet** 14 of Fig. 3 is shown having an optional bend 15 in the **stylet** to help **guide** the **stylet** around the bends and **curves** within the intra-urethral device during insertion over the **stylet** .

Guard 18 of Figs. 2 and 3 is shown in an alternative embodiment being configured to limit the insertion of distal tip of **stylet** 14 into the urethra to a distance 19.

Plunger **assembly** 16 is shown in detail in Figs. 2 and 3. Plunger **assembly** 16 is shown extending through handle 22 for exemplary purposes. Plunger **assembly** 16 is typically configured to allow a user to depress the plunger **assembly** after inserting the intraurethral device on the **stylet** into the urethra. The plunger **assembly** typically includes a rod 27 slidably mounted through body 12. To better facilitate pushing, rod...

...element 26 is secured to rod 16. Pushing element 26 is typically slidably disposed about **stylet** 14.

Pushing element 26 is configured to contact a proximal end of an intra-urethral device and slidably remove the device from the **stylet** . Pushing element 26 may also include a detent 28 configured to cooperate with a proximal...

...5
device 40, shown in Fig. 4A, to prevent rotation about the longitudinal axis of **stylet** 14 during insertion. A second detent 29 may be provided on body 12 also configured...

...prior to insertion. Alternatively to a plunger, detent 28 may be slidably disposed about the **stylet** and enlarged to include a gripping or pushing surface or detent 28 may be attached...

...or the structure attached to detent 28 could be used to push the intra-urethral **device** along the **longitudinal** axis of **stylet** 14.

The method of using an insertion tool in accordance with the present invention is...

...device is inserted through the urethra. Once the retention structure has reached the bladder, the **stylet** is removed to reform the retention structure in a retentive conformation. Figs. 4A, 4B and...

...the distal end of intra-urethral device 40. Intra-urethral device 40 is place over **stylet** 14 through a lumen located at the device's proximal end. The insertion of **stylet** 14 through the lumen collapses distal retention structure 42, shown for exemplary purposes as a loop, as the **stylet** enters a portion of the lumen contiguous with the retention structure. Once collapsed, distal retention...

...4B. Proximal retention structure 43 may further be removably secured to detent 28 of plunger **assembly** 16. The connection to detent 28 prevents the rotation of intra-urethral device 40 during...

...shown in Figs. 4C. The connection to second detent 29 assists in holding plunger
6
assembly 16 in position relative to body 12 during insertion. At this point, lubrication is typically...user that the intra-urethral device has been inserted the proper distance for insertion.

Plunger **assembly** 16 is then depressed and pushing element 26 of pushing

assembly 16 I 0 pushes intra-urethral device 40 from the **stylet** . This action removes proximal retention structure 43 from second detent 29. As intra-urethral device 40 is removed from **stylet** 14, retention structure 42 resumes its original retentive configuration. Once in the retentive configuration, **stylet** 14 of insertion tool 10 is withdrawn from the intra-urethral device positioned in the...

Claim

I An apparatus for inserting an intra-urethral device, comprising:
a **stylet** ; and
a body secured to the **stylet** , the body including a guard wherein the guard is configured to prevent over-insertion of the **stylet** into a urethra.

2 An apparatus, as in Claim 1, wherein the body is further...

...apparatus, as in Claim 1, further comprising a detent slidably disposed about the 1 5 **stylet** configured to prevent the intra-urethral device from rotating around the **stylet** during removal of the intra-urethral device from the **stylet** .

5 An apparatus, as in Claim 1, further comprising a plunger adapted to remove the intra-urethral device from the **stylet** .

6 An apparatus, as in Claim 5, wherein the plunger is configured to prevent the intraurethral device from rotating around the **stylet** during removal of the intra-urethral device from the **stylet** .

8

. The apparatus, as in Claim 6, wherein the plunger is attached to a detent, the detent configured to prevent the intra-urethral device from rotating around the **stylet** during removal of the intra-urethral device from the **stylet** .

8 An apparatus, as in Claim 5, wherein the body includes a handle.

9 An...

...providing an intra-urethral device insertion tool comprising a body having a guard and a **stylet** secured to the body, wherein the guard is configured to prevent over-insertion of the **stylet** into the urethra; and a intra-urethral device; inserting the **stylet** into the intra-urethral device through a proximal end of
1 5 the intra-urethral...

...of the intra-urethral device through a urethra into a urinary bladder; and
removing the **stylet** from intra-urethral device.

11 A method, as in Claim IO, wherein the intra-urethral...
...insertion tool further comprises a plunger adapted to remove the intra-urethral device from the **stylet** .

9

. A method, as in Claim 12, wherein the plunger is configured to prevent the intraurethral device from rotating around the **stylet** during removal of the intra-urethral device from the **stylet** .

14 A method, as in Claim 12, wherein the intra-urethral device insertion

tool further...

...in Claim 14, wherein the handle and the plunger are configured to allow removing the **stylet** from the intra-urethral device with one hand of a user.

10

AMENDED CLAIMS

[received...

...for inserting an intra-urethral device into the urethra of a patient, the intra-urethral **device** comprising an **elongated** flexible shaft with a **stylet** receiving lumen extending from a proximal end toward but short of a distal end and...

...adapted to be received in the patient's urinary bladder, the apparatus comprising: (a) a **stylet** adapted to be placed in the **stylet** receiving lumen of the intra
urethral device to render the retention loop rectilinear,
(b) a body secured to a proximal end of the **stylet** to and including a guard thereon for preventing over-insertion of the **stylet** carrying the intra-urethral device into the
patient' s bladder; and
(c) a pusher member...

...on the body and cooperating with the proximal end of the intra-uretbral device for **stripping** the intra-urethral device from the **stylet** when the pusher member is actuated.

2 The apparatus of claim I and further including:
(a) a detent slidably disposed about the **stylet** and coupled to the pusher member adapted to cooperate with the intra-urethral device to prevent the intra-urethral device from rotating about the **stylet** as the intra-urethral device is being **stripped** from the **stylet** .

3 The apparatus as in claim I wherein the pusher member comprises a plunger having...

...for cooperating with the intra-urethral device to prevent rotationthereofwhen the plunger is depressed to **strip** the intra-urethral device from the **stylet** .

1 1

AMENDED SHEET (ARTICLE 19)

. A method for inserting an intra-urethral device into...

...urethra and bladder of a patient comprising the steps of. (a) providing a intra-urethral **device** comprising an **elongated** , flexible shaft with a **stylet** receiving lumen. extending from a proximal end toward, but short of a distal end and...

...b.) providing an insertion tool comprising a body slidingly supporting a plunger and carrying a **stylet** and a guard member;
(c) inserting the **stylet** into the lumen ofthe intra-urethral device to a distance
rendering the retention loop rectilinear;
(d) inserting the distal end ofthe intra-urethral device on the **stylet** through the patient's urethral meatus and advancing same until the guard abuts an area surrounding the
urethral meatus; and
(e) actuating the plunger to **strip** the intra-urethral device from the

stylet .
1 2 .
AMENDED SHEET (ARTICLE 19)
STATEMXNT UNDER ARTICLE 19(1)
The replacement pages 8...

40/3,K/186 (Item 186 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00797084 **Image available**
SURGICAL INSTRUMENT
INSTRUMENT CHIRURGICAL
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Detailed Description
Claims

English Abstract
The invention provides a surgical **instrument** for inserting an **elongate** element into a human patient. In the preferred form of the invention the instrument has...

...shaft defining an arc corresponding to the general curvature of a passage between the anterior **vaginal** wall and the abdomen of a female patient and having a cutting tip at one...

French Abstract
...creuse definissant un arc correspondant a la courbure generale d'un passage entre la paroi **vaginale** anterieure et l'abdomen d'une patiente, et comprenant une tete tranchante a une extremite...

...de l'uretre de la patiente et permettant a celle-ci de mieux controler son **incontinence** urinaire.

Detailed Description
... particulariv the invention relates to an apparatus and Tmethod ior tne treatment of female urinarv **incontinence** .

Background of the invention

Female **incontinence** generallv occurs due to deterioration of or damage to muscle tissue and ligaments in the pelvic region. This results in involuntary leakage of **urine** from the **urethra** due to **lack** of **control** of the patient's pelvic muscles, particularly the urogenital diaphragm and pubo urethral ligaments. It...

...5,112,344 describes a method and apparatus for treating female 1 rne I v **incontinence** . The surcy'cal instrument for the application of a fi amentary ele nt into the bod comprises a tubular shaft having a handle at one end and a flexible **needle** slidably receivable in the shaft and adapted at one end to receive a filamentary element. The method of treating female **incontinence** comprises looping a filamentary element between the wall of the vacrina and the rectus abdominis...

...wherebv it masses to each side of the urethra. adjusting the loop to bring the **vaginal** wall and the urethra into the correct spatial Z zn LI relationship to the pubis allowing the development of scar tissue between the **vaginal** wall and the anterior wall of the abdomen pubic symphysis and removing the filamentarv element.

The Claren Patent, United States Patent 5,899,909. also describes a **surgical** instrument and a **method** for **treating** female urinary **incontinence** The instrument comprises a shank having a handle at one end thereof, and two **curved** **needle** -like elements which are connected at one end thereof each with one end of a **tape** intended to be implanted into the bodv. These elements can be connected one at a...

...bodv via the vaLyina. each element being dimensioned to extend from the inside of the **vagInal** wall over the back of the pubic bone to the outside of the abdominal wall. When practicing the method the **tape** is passed into the body via the vacrina first at one end and then at...

...the urethra to form a loop around the urethra, located between the urethra and the **vaginal** wall. The **tape** is extended over the pubis and through the abdominal wall and is Z7 tiorhtened. Then, the ta-De ends are cut at the abdominal wall, and the **tape** is left implanted in the body.

Summary of the invention

In its broadest form the 'Invention provides a surgical **instrument** for use in placing an **elongate** element into a patient said **instrument** comprising.

tn an eloncrate shaft definino an internal passage, said shaft havincy a cuttincy tip...

...use in placing a filamentary element into a female patient so as to form a **sling** or loop around the C) urethra extending over the back of the pubic bone, to...means comprises screw threads formed on the outer surface of the shaft. Preferably the shaft **tapers** divergently towards the handle attachment means so as to

form a smooth transition between a...

...instrument for use in placing a filamentary element into a female patient to form a **sling** or loop between an anterior surface of the va(yinal wall, around the back of...

...method of introducing a filamentary element into a female patient so as to form a **sling** or loop extending around the urethra to an anterior surface of the abdominal wall, said...

...having a longitudinally extending internal passacre, into the patient through the anterior surface of the **vaginal** wall, so as to pass
4n ID
on one side of the urethra between the...

...of para-urethral incisions are made at or very near each anterior sulcus of the **vagina** . A tunnel is created by blunt dissection between the urethra and the **vaginal** wall, extending from each **vaginal** incision. Prior to conducting step (e) the end of the filamentary element adjacent the **vagina** is passed through that tunnel and out of the second of the two incisions. Step...invention.

Figure 3 shows an exploded perspective view of the elements required to perform an **operation** using the **surgical** instrument of the invention.

Flaures 4 - 6 show the manner in which the surcylcal instrument...

...selected so that the shaft is able to pass through an anterior surface of the **vaginal** wall behind the pubis to emerge through the abdominal wall. The radius of curvature is...manner described above and the shaft will be inserted into a patient typically through the **vagina** from a position inwards from the urethro vesical junction, the cutting tip passing the body...

...paraurethral vacrina incisions will be made at or very near each anterior sulcus of the **vagina** . A
:n
tunnel will then be formed by blunt dissection between the urethra and the **vaginal** wall, the tunnel extending between the two para-urethral incisions. Typically the two incisions and...

...be withdrawn from the patient from either the abdominal side of the patient or the **vaginal** side of the patient and the shaft is specifically shaped and conficrured for
:-D
2...

...filamentary element through the shaft.

It will be noted that the shaft 12 has a **tapered** portion 60 adjacent the trailing end 17 thereof which provides a smooth transition between the cylindrical central portion of the shaft and the threaded end 17 thereof. This **tapered** portion 60 is specifically designed to allow the
Z)
shaft to be drawn in a forward direction through the patient without causing any further tissue damage to the patient. The **taper** angle of the **tapered** position should be small, that is, about 5' or less. Other

connection arrangements are possible...

...the two incision process is preferred, the vacrinal end of the filament will be
C@
guided through the aforementioned tunnel and out of the second incision. The handle will then be...

...shaft will need to pass through the patient which is why the smooth and slightly **tapered** section 60, referred to above, is provided and also the fact that the threads 16...of the handle portion 72. causes difficulty in passing the instrument through a patient.

Clearly, **different** forms of **handle** **grip** arrangements will be possible and specifically envisaged is an arrangement in which longitudinally aligned gripping...so as to rest within the patient, then the shaft may be withdrawn from the **vaginal** side of the patient. This will require only a single abdominal side incision. Indeed, it may be le to perform the procedure from the **vaginal** side of the patient exclusively provided it is
possib I 1
possible to cause a...

...circular cross sectional configuration.

C
Figures 15 and 16 depict an alternative version of the **cutting** tip of the **instrument** . As shown in figure 15 and figure 16 the cutting tip is defined by two...

Claim
I A surgical **instrument** for use in placing an **elongate** element into a patient said
instrument comprising:
Z:)
an eloncrate shaft definincy an internal passage, said shaft haviner a cuttiner tip...

...one of claims I to 10 wherein the internal
t7)
passage terminates rearward of the **cutting** tip.

12 A surgical **instrument** for use in placing a filamentary element into a female
C)
patient so as to form a **sling** or loop around the urethra extending over the back of the pubic
bone to the...

...in placing a filamentary element into a female
Z@
patient so as to form a **sling** or loop around the urethra over the back of the pubic bone, to the
abdominal...

...of the shaft. I S. A suraical instrument according to claim 17 wherein the shaft **tapers** divergently towards the handle attachment means so as

to form a smooth transition between a...instrument for use in placing a filamentary element into a female patient to form a **sling** or loop around the urethra extending over the back of the pubic bone to the...

...method of introducing a filamentary element into a female patient so as to form a **sling** or loop extending around the urethra to the abdominal wall, said method including
the steps...

...internal passage into the patient through a first incision in the anterior surface of the **vaginal**
O
wall, so as to pass on one side of the urethra between the pubis...

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VISUALLY-DIRECTED SURGICAL **INSTRUMENT AND** METHOD **FOR** TREATING **FEMALE URINARY** INCONTINENCE
INSTRUMENT CHIRURGICAL A GUIDAGE VISUEL ET PROCEDE PERMETTANT DE TRAITER L' INCONTINENCE **URINAIRE CHEZ LA FEMME**
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VISUALLY-DIRECTED SURGICAL **INSTRUMENT AND** METHOD **FOR** TREATING **FEMALE URINARY** INCONTINENCE
INSTRUMENT CHIRURGICAL A GUIDAGE VISUEL ET PROCEDE PERMETTANT DE TRAITER L' INCONTINENCE **URINAIRE CHEZ LA FEMME**
Main International Patent Class: **A61F-005/48**
Fulltext Availability:
Detailed Description
Claims

English Abstract
Described is a **surgical** instrument, and **method** for **treating** female urinary stress **incontinence** . The instrument includes a **curved needle** -like element (10) defining in part a curved shaft (18) having a distal end (17), and a proximal end (19). A **tape** (12) attaches to the **needle** (10) for implanting into the lower abdomen of a female to provide support to the urethra. The **needle** (10) defines an inner lumen (100) for passage of optical devices, and/or fluids. A surgical optical system may interface directly with the **needle** , or alternatively, the **needle** hand piece or handle may be modified to accept the optical system. The tip of the **needle** is also modified to contain a window or viewing port that allows for the transmission...

...system allows the surgeon to maintain continuous anatomic visualization during introduction, and navigation of the **needle** within the lower abdomen.

French Abstract
La presente invention concerne un instrument chirurgical et un procede permettant de traiter l' **incontinence** urinaire d'effort chez la femme. Ledit instrument comprend un element (10) courbe, ressemblant a...

Detailed Description
... beginning ofeach regular issue of the PCT Gazette.

UNITED STATES PATENT APPLICATION FOR.

VISUALLY-DIRECTED **SURGICAL** INSTRUMENT
AND **METHOD** FOR **TREATING** FEMALE URINARY **INCONTINENCE**
CROSS REFERENCE TO RELATED APPLICATION
The present invention claims the benefit of earlier-filed United...

...in its entirety herein.

BACKGROUND OF THE INVENTION
The present invention relates generally to a **surgical** instrument and a **method** for **treating** female urinary **incontinence** and in particular to a **needle** adapted to provide visualization of the tissue during the procedure.

Women account for more than 1 1 million of **incontinence** cases. Moreover, a majority of women with **incontinence** suffer from stress urinary **incontinence** (SUI). WO 00/74613 PCT/USOO/15215 2
United States Patent 5,112,344 describes a **method** and apparatus for **treating** female **incontinence** . The **surgical** instrument for the application of a filamentary element into the body comprises a tubular shaft having a handle at one end and a flexible **needle** sliclably receivable in the shaft and adapted at one end to receive a filamentary element. The method of treating female **incontinence** comprises looping a filamentary element between the wall of the **vagina** and the rectus abdorninis sheath in the anterior wall of the abdomen whereby it passes to each side of the urethra, adjusting the loop to bring the **vaginal** wall and the urethra into the correct spatial relationship to the pubis allowing the development of scar tissue between the **vaginal** wall and the anterior wall of the abdomen pubic symphysis and removing the filamentary element...

...end and connecting means at the other end to receive, one at a time, two **curved needle** -like elements which are connected at one end to one end of a **tape** intended to be implanted into the body. In practice, the **tape** is passed into the body via the **vagina** first at one end and then at the other end at one side and the...

...of the urethra to form a loop around the urethra, located between the urethra and **vaginal** wall. The **tape** is extended over the pubis and through the abdominal wall and is tightened. The **tape** ends are cut at 2 0 the abdominal wall, and the **tape** is left implanted in the body. U.S. patent no.

5,899,909 is incorporated...

...for surgeons
unfamiliar with the surgical method is not completely knowing the location of the **needle** tip relative to adjacent pelvic anatomy. If the **needle** tip is allowed to 2 5 accidentally pass across the surface of any blood vessel...

...nerve bundle or organ possible complications may arise.

It would be beneficial to provide a **needle** for use in implanting a **mesh** **tape** within a female body to prevent **incontinence** that has a design that provides for visualization of the tissue as the **needle** passes through the woman's lower 3 0 abdomen.

SUMMARY OF THE INVENTION
The invention overcomes the deficiencies of the prior art and provides for an improved **needle** for use with an apparatus and a method for the treatment of female stress urinary **incontinence** . The invention provides a surgical instrument comprising a handle at one end and connecting means at the other end to receive, one at a time, two **curved** **needle** -like elements, each of which has a modified tip. The **needle** may have a constant or varying diameter. Each **needle** connects at one end to separate ends of a **tape** intended to be implanted within the body. In practice, a first end of the **tape** is passed, via one of the **curved** **needles** , into the body via the **vagina** at one side of the urethra. The **needle** and first end of the **tape** pass over the pubis and through the abdominal wall. The second **needle** element connects to the second end of the **tape** and passes into the body via the **vagina** at the opposite site of the urethra from the first end of the **tape** thereby forming a loop or **sling** around the urethra with the **tape** . The second end of the **tape** is extended over the pubis is and through the abdominal wall. The **tape** ends are cut at the abdominal wall, and the **tape** is left in the body.

The invention further provides for a single **curved** **needle** element having a modified tip. The **needle** may have a constant or varying diameter and further provides for a easy attachment means enabling the surgeon to connect both the first 2 0 and second **tape** ends to the single **needle** to perform the above-stated procedure.
In both embodiments, the **needle** is modified to contain an inner lumen for passage of optical devices and/or fluids. A surgical optical system may interface directly with the **needle** , or alternatively, the hand piece or handle may be modified to accept the optical system. The tip of the **needle** is also modified to contain a window or viewing port that allows for the transmission...

...system allows the surgeon to maintain continuous anatomic visualization during introduction and navigation of the **needle** within the lower abdomen.

The object of the invention is to provide a surgical instrument for implanting a 3 0 **mesh** to treat **incontinence** that provides for an optical viewing system that allows the surgeon to view tissue and vital organs as the **needle** penetrates the lower abdomen of a female patient.

An advantage of the invention is that...the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

FIGURE I a is a view of the **needle** in one embodiment thereof;

FIGURES 1 b-d are views of alternate embodiments of the **needle** ;

FIGURE 2a is a side view of two **needles** and a **tape** interconnecting the **needles** ;

FIGURE 2b-d are alternate embodiments of the **tape** and connecting means between the **tape** and **needle** ;

FIGURES 3a-h embodiments of means for attaching the **tape** to the **needle** ;

FIGURES 4a-c are embodiments of the viewing ports at the tip of the **needle** ;

FIGURE 5 is an **assembly** schematic of the **needle** and handle;

2 0 FIGURES 6a-g illustrate diagrammatically several surgical steps of the method utilizing two **needles** according to the invention to treat SUI;

FGIURE 4h illustrates the final position of the **tape** within the body before the **tape** ends are cut; and

FIGURES 7a-h illustrate diagrammatically surgical steps of the method 2 5 utilizing one **needle** according to the invention to treat SUI.

DETAILED DESCRIPTION OF THE INVENTION

Before explaining the...

...of limiting the invention.

The invention discloses an apparatus and method for treating SUL A **tape** is passed through pelvic tissue and positioned underneath the urethra, creating a supportive **sling** . The **tape** provides a structure means for tissue ingrowth and thereby provides a newly created body tissue...

...pressure is exerted upon the lower abdomen, such as during a cough or sneeze, the **tape** provides support to the urethra, allowing it to keep its seal and prevent the unwanted discharge of urine.

Referring to Figs. la and 2a, the surgical instrument comprises a **needle** -like element 1 0 that attaches to a **mesh** **tape** 12. **Needle** element 1 0 defines a certain is radius R to perform the surgical procedure discussed herein. The distal end of **needle** element 1 0 terminates at a conical section 14 having a tip 16. Alternate configurations...

...0 blood vessel wall tissue as will be appreciated from the method of implanting the **tape** as described below. In one embodiment, blunt tip 16 is made from a clear material...

...tip 16 may be manufactured from a clear polymer or glass.

The proximal end of **needle** 1 0 terminates in an attachment segment 20 that is adapted to mate and lock...

...of a circle in order to follow substantially the profile of the pubis between the **vagina** and the abdominal wall. For the purposes of the method as will be discussed in...

...distal end 17. This design takes into account, that in the method to implant the **tape** 12, the bending stresses are lowest at distal end 17, while the bending stresses are...

...or semi-rigid endoscope 1 1 0, which has the flexing capability to follow the **curvature** of **needle** 1 0. Preferably, the endoscope comprises a fiber bundle of less than 40K, and more...

...a fiber bundle of 30K to allow the scope to bend along the radius of **needle** 1 0. As illustrated the lumen 1 00 is located concentrically through **needle** 1 0 2 0 and access port 112 is located at the proximal end of portion 20. This embodiment allows the entire **needle** 10 to be placed in-vivo before requiring the removal of the scope 1 1...the art.

Lumen 1 00 may also serve as a conduit for passing fluids through **needle** 1 0.

For example, an irrigation solution may be passed through **needle** 1 0 and through cone portion 14 to clear the field of view at cone...

...0 via lumen 100 may be used to produce a passageway through the tissue for **needle** 1 0 via hydrojetting. Lumen 1 0 may also be used to deliver a radiopaque...

...1 00. The fluid delivery lumen could exit cone portion 14 or it could exit **needle** 1 0 immediately adjacent and proximal to cone portion 14.

Lumen access port 1 1...

...to allow lateral (left or right) entry and exit of endoscope 1 1 0 to **needle** 1 01 Fig. I c; or as shown in Fig. 1 d, lumen access port...

...1 2 may be located adjacent to the hand piece connection allowing all of the **needle** to be place in-vivo before having to 1 0 remove endoscope without requiring modification...

...allows the endoscope to pass through the cone portion 14 for tissue inspection prior to **needle** advancement. Fig. 4b discloses a cone portion 14b with is the distal end terminating at...

...the threaded section 113aattheproximalendofneedle10asdiscussedinU.S.5,899,909. Once fastening rod is securely fixed to **needle** IO, endoscope 1 1 0 may be inserted through shaft415 and central lumen 1 00 of **needle** 1 0 until endoscope terminates at cone portion 14.

Needle 1 0 is preferably tubular with a circular cross section and is made from a material that is compatible with the human body. It is also preferred that **needle** 1 0 3 0 is made from a material that can be autoclaved to enable multiple surgical procedures of **needle** 10. Preferably, needle 10 is made from 303 stainless steel.

The surface of shaft 18 may be smooth, preferably polished, to facilitate penetration of the soft tissue. Alternatively, the surface of **needle** 1 0 may have a somewhat rougher surface. A rougher surface would result in slightly additional tissue trauma, which in turn stimulates fibroblast activity around the **tape** 12.

Needle 10 may be manufactured as a single, continuous unit, or

alternatively, curved portion 18 may...

...means as is known to those skilled in the art.

Referring to Figs. 2a-d, **tape** 12 comprises any tissue-compatible synthetic material, or any natural material, including, but not limited ...

...a tissue engineered matrix, or a combination thereof. An exemplary synthetic material is PROLENEO polypropylene **mesh** , a **mesh** having a thickness of 0.7 mm and openings of about 1 mm manufactured by...

...Drug Administration is for implantation into the human body. A still further embodiment of the **tape** 12 is a combination of a synthetic material 1 1 and a natural material 13...

...material 1 1 as shown in Figs. 2b-c. A still further embodiment of the **tape** 12 includes a combination of synthetic material 1 1 and natural material 13, whereby the...

...generally central 2 0 portion of the synthetic material 1 1. One advantage of the **tape** configurations is that natural material 13 is along the center region of **tape** 12 so that after installation of **tape** 12, natural material 13 is positioned below the urethra and eliminates possible erosion issues at the interface of the urethra and **tape** . Natural material 13 may be connected to the synthetic material 1 1 by means of sewing, a bio-compatible glue, 2 5 cell culturing techniques or other known means.

Tape 12 may be of any convenient shape that suits the intended purpose of the invention...

...and the length would be dependent upon the size of the female undergoing the procedure. **Tape** 12 may be single or double ply, generally planar in structure, or tubular (Fig. 2d...

...3 0 supporting strength and more surface area on which tissue fibers may attach.

Moreover, **tape** 12 may consist of different types of material, such as a bioabsorbable and non-bioabsorbable material. **Tape** 12 may also be coated with an antimicrobial additive to prevent or minimize infection and a lubricous coating, for example, a bioabsorbable hydrogel, to facilitate the **tape** passing through the tissue as discussed below. Preferably, **tape** 12 is covered by a removal plastic sheath as disclosed in U.S. patent no. 5,899,909. The **tape** may also be made radio-opaque and/or of a contrasting color to the body tissue to allow for future diagnostic visualization.

In one embodiment **tape** 12 may be attached to **needle** segment 20 by means of tying, gluing or other suitable attaching means. Preferably, a biocompatible heat shrink tube fixes **tape** 12 onto **needle** portion 20, Fig. 2a. In a further embodiment, as shown in Figs. 2b-d and 3a-h, **needle** 10 and **tape** 12 are further configured to enable easy attachment and detachment of **tape** 12 to and from **needle** 1 0 by the **surgeon** during the **operation** . This embodiment allows for the use of a single **needle** for the procedure. This embodiment also allows for the use of a

tape constructed, at least in part, of natural materials, which are otherwise not suitable in the...

...receive connecting tabs 32 and 32a that are attached at either ends of 2 0 **tape** 12 (see Figs. 2b-d). Preferably, slot 40 extends through curved shaft 18 and is
further located at the distal end 17 of **needle** 10 so that **tape** 12 may be
disconnected from **needle** 1 0 immediately after **needle** 1 0 penetrates the abdomen wall, discussed below.

Tab 32 may be constructed from any...

...expand and securely fasten tab 32 within slot 40. Tab 32 may be attached to **tape** 12 in any number of convenient methods as previously discussed and well known to those...

...is well known in the art.

Figs. 3f-h illustrate an alternate embodiment of affixing **tape** 12 to the distal end 17a of **needle** 1 0. A detachable **blunt** tip 16d having a connecting post 1 51 attaches to the distal end 17a by...

...pass to the distal end of cone tip 14d. Further, as shown in Fig. 3h, **tape** 12 is attached to the outer circumference of post 15 to allow for the imaging...

...end 17a further defines a groove 23 of varying depth to allow the end of **tape** 12 connected to post 15 to transition from within hole 15a to the exterior of **needle** 10. Along with the embodiment of Figs. 3a-e, this embodiment allows the surgeon to affix **tape** 12 to **needle** 1 0 just prior to the surgical procedure. One advantage is the ability to use a **tape** 12 constructed of, at least in part, a natural material 13.

As would be appreciated...

...one skilled in the art, there exist multiple means 2 0 for detachably connecting the **tape** to the **needle** . Alternate embodiments would include tying the ends of **tape** 12 to form a knot and securely inserting the knot into a V-type groove in shaft 18. Alternately, a diagonal slit in shaft 18 could accept **tape** 12 or a suture extending from **tape** 12.

The surgical procedure for implanting **tape** 12 using two **needles** is shown
in Figs. 6a-g utilizing the **needle** embodiment illustrated in Figs. 1a and 2a. In the figures the relevant parts of the female lower abdomen are disclosed, the **vagina** being 50, the uterus 52, the urethra 54, the pubic bone 56, the urinary bladder 58 and the abdominal wall 60. The first **needle** 1 Oa penetrates the **vaginal** wall, an incision having first been made in the wall to create a tissue flap. The **needle** is 3 0 attached to handle 41 1, and an endoscope is inserted through lumens...

...6 and 1 00 until the scope terminates at the distal cone portion 14 of **needle** 1 Oa. While viewing the visual feedback of the endoscope, preferably on an overhead screen 126, the surgeon **guides** **needle** 1 Oa through the **vaginal** wall and through the soft tissue on one side of the urethra 54, the **needle** then according to Fig. 6b being passed close to

the back of the pubic bone...

...56. An incision can be made through the abdominal wall for the passage of the **needle** therethrough.

The endoscope is removed from within lumen 1 00, and handle 41 1 is disconnected from **needle** 1 Oa, Fig. 6c, and the **needle** 1 Oa along with **tape** 12 ...withdrawn from the abdomen wall by means of forceps, Fig. 6d.

Referring to Fig. 6e, **needle** 1 Ob is now attached to handle 41 1 and endoscope 1 1 0. The surgeon passes **needle** 1 Ob through the incision in the **vaginal** wall and through the soft tissue, again, while viewing the image from the endoscope 1 10, on the opposite side of the urethra than the previous end of **tape** 12. **Needle** 1 Ob passes close to the back of the pubic bone, through additional layers of...

...pubic bone and withdrawn, Fig. 6g.
Figs. 7a-g illustrate an alternate method of implanting **tape** 12 using a single **needle** 10. **Tape** 12 is attached to **needle** 10 by means of conical portion14 as shown in Fig. 3f. **Needle** 1 0 penetrates the **vaginal** wall, an incision having first been 2 0 made in the wall to create a...

...feedback of the endoscope 1 1 0, preferably on an overhead screen 126, the surgeon **guides** **needle** 1 0 through the **vaginal** wall and through the soft tissue on one side of the urethra 54, the **needle** then according to Fig. 7b being passed close to the back of the pubic bone...

...be made through the abdominal wall for the passage of the distal end 17 therethrough. **Needle** 1 0 only continues to pass through the abdominal wall until cone portion 14 may be disconnected from **needle** 1 01 Fig. 7c. To do so, the surgeon simply pulls off cone portion 14 using forceps. Cone portion 14 may then be cut off and **tape** 12 may be 3 0 pulled out of the abdominal wall to allow the surgeon additional length for the procedure. **Needle** 1 0 is then removed from the patient along the same path that it - 12 entered, but in the opposite direction, Fig. 7d. Alternatively, **needle** 10 may be disconnected from handle 41 1 and endoscope 1 1 0 and pulled out through the
abdomen wall 60 using forceps as discussed with regard to the two **needle**

procedure.

Needle 10 is now attached to the opposite end of **tape** 12 using connector
cone portion 14. The surgeon passes **needle** 10 through the incision in the **vaginal** wall and through the soft tissue on the opposite side of the urethra than the previous end of **tape** 12, Fig. 7e. **Needle** 10 passes close to the back of the pubic bone, through additional layers of fat, muscle and fascia, Fig. 7f, and then through the abdominal wall above the pubic bone. **Needle** 1 0 continues to pass through the abdominal wall only until cone portion 14 may be disconnected from **needle** 1 01 Fig.

7g. **Tape** 12 may be pulled out of the abdominal wall to allow the surgeon additional length for the procedure. **Needle** 1 0 is then removed from the patient along the same path that it entered, but in the opposite

direction. Alternatively, **needle** 10 may be disconnected from handle 41 1 and pulled out through the abdomen wall...

...using a local anesthesia, the patient is able to provide feedback to the surgeon after **tape** 12 is in place. Typically, the urinary bladder 58 is filled with a fluid, such as water, using a catheter and the 2 0 patient is requested to cough. The **surgeon** is able to determine the **operation** of the urethra and may adjust the **tape** 12, as necessary, by adjusting the ends of **tape** 12 located at the outside of the abdomen 60, Figs. 6h and 7h. After adjustments, the surplus **tape** at the abdomen is cut off, and the ends of the **tape** are secured within the abdomen and the abdomen is closed. Likewise, the incision at the **vaginal** wall 2 5 is closed whereby the tissue flap seals the **tape** between the urethra 54 and the wall of **vagina** 50.

Tape 12 is left in the body and forms an artificial ligament attached to the abdominal...

Claim

A **surgical** instrument for **treating** female urinary stress **incontinence**
comprising:
a) a **tape** for implanting into the lower abdomen of a female to provide support to the urethra; and
b) a **curved** **needle** -like element having a proximal end and a distal end
and defining in part a...

...transmitting means for transmitting images at the distal end to viewing means external of the **needle** .

2 The surgical instrument of claim 1 wherein the conical tip comprises a is viewing...

...the lurnen extends from the distal 2 0 end to the proximal end.

5 A **surgical** instrument for **treating** female urinary stress **incontinence**
comprising:
a) a **curved** **needle** -like element having a distal end and a proximal end
and defining in part a...

...transmitting means for transmitting images at the distal end to viewing means external of the **needle** .

6 The surgical instrument of claim 5 wherein the lumen extends from the distal 3 0 end to the proximal end.
- 15 -

7 A **surgical** **system** for **treating** female urinary stress **incontinence** comprising:
a. a **tape** for implanting into the lower abdomen of a female to provide support to the urethra;
b. a **curved** **needle** -like element having a proximal end and a distal

end and
defining in part a...

...an optical system for transmitting images from the endoscope to viewing means external of the **needle** .
8 The surgical system of claim 7 wherein the optical system comprises a camera, light...

...for viewing images from the endoscope.

9 The surgical system of claim 7, wherein the **needle** -like element defines, at the distal end, a conical tip.
is

10 The surgical system...

...from the distal end to the proximal end.

13 A method for treating female urinary **incontinence** comprising the steps of: a) providing a first and second **curved** **needle** -like element, each defining
in part a curved shaft and having a distal end and a proximal end, the **needle** defining a lumen for accepting a light transmitting means for transmitting images at the distal end to viewing means external of the **needle** and a **tape** attached to both **needle** elements;
- 16 b) passing the first **needle** and attached **tape** into the body via the **vagina**
and on one side of the urethra and extending the **tape** over the pubic bone and through the abdomen wall;
c) passing the second **needle** and attached **tape** into the body via the **vagina** and on the opposite side of the urethra than the first **needle** and extending the **tape** over the pubic bone and through the abdomen wall, creating a supporting **sling** below the urethra; and
d) viewing images at the distal end of the **needle** during steps (b) and (c).

14 A method for treating female urinary **incontinence** comprising the steps of: a) providing a **curved** **needle** -like element defining in part a curved shaft
and having a distal end and a proximal end, a **tape** attached thereto, the **needle** defining a lumen for accepting a light transmitting means for transmitting images at the distal end to viewing means external of is the **needle** and; and
b) passing the **needle** and **tape** into the body via the **vagina** to form a
sling around the urethra; and
c) viewing images at the distal end of the **needle** . 2 0 15. A method for treating female urinary **incontinence** comprising the steps of: a) providing a **curved** **needle** -like element defining in part a **curved** shaft,
the **needle** defining a lumen for accepting a light transmitting means for transmitting images at the distal end to viewing means external of the **needle** ;
2 5 b) attaching a **tape** to the **needle** ;
c) passing the **needle** and **tape** into the body;
d) attaching the **tape** to the **needle** and passing the **needle** and **tape** into

the body to form a **sling** around the urethra the and
e) viewing images at the distal end of the **needle** .
3 0

16 A method for treating female urinary **incontinence** comprising the steps of: - 17
a. passing a **tape** into the body via the **vagina** to form a loop around the
urethra, the loop formed between the **vaginal** wall and urethra and extending the **tape** over the pubic bone; and
b. viewing images of ambient tissue while passing the **tape** into the body.
/26
14 FIGURES
I -@- 4a-4c
f
16
18 17
// @@@lo
1010...

40/3,K/196 (Item 196 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00761582 **Image available**
SURGICAL **INSTRUMENT FOR** TREATING **FEMALE URINARY** INCONTINENCE
INSTRUMENT CHIRURGICAL DE TRAITEMENT DE L' INCONTINENCE **URINAIRE CHEZ LA FEMME**

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SURGICAL **INSTRUMENT FOR** TREATING **FEMALE URINARY** INCONTINENCE
INSTRUMENT CHIRURGICAL DE TRAITEMENT DE L' INCONTINENCE **URINAIRE CHEZ LA FEMME**

Main International Patent Class: **A61F-002/02**
Fulltext Availability:
Detailed Description
Claims

English Abstract
A **surgical** instrument and **method** for **treating** female urinary stress **incontinence** . The instrument includes a **curved needle** -like element (10) defining in part a curved shaft (18) having a distal end (17) and a proximal end (19). The diameter of the **needle** (10) decreases from the proximal end to the distal end, and the **needle** terminates in a **blunt** tip (16). A **tape** (12) attaches to the **needle** for implanting into the lower abdomen of a female to provide support to the urethra (54). The **tape** (12) may be made from synthetic and natural materials. The **needle** (10) and **tape** (12) may also be modified to allow the surgeon to attach and detach the **tape** during the **surgical operation** .

French Abstract

...invention se rapporte a un instrument chirurgical et a une methode de traitement de l' **incontinence** urinaire chez la femme. Cet instrument comporte un element incurve (10) de type aiguille definissant...

...a l'extremite distale, et l'aiguille se termine par une extremite arrondie (16). Une **bande** (12) est reliee a l'aiguille de maniere a pouvoir etre implantee dans le bas ventre d'une femme et a assurer le support de l'uretre (54). Cette **bande** peut etre en matiere synthetique ou en matiere naturelle. L'aiguille (10) et la **bande** (12) peuvent egalement etre modifiees pour permettre a un chirurgien d'attacher et de detacher ladite **bande** en cours d' **operation** **chirurgicale** .

Detailed Description

... at the beginning ofeach regular issue of the PCT Gazette.

Published.

- With international search report.

SURGICAL INSTRUMENT FOR **TREATING** FEMALE URINARY **INCONTINENCE**

CROSS REFERENCE TO RELATED APPLICATION

The present invention claims the benefit of earlier-filed United...

...in its entirety herein.

BACKGROUND OF THE INVENTION

The present invention relates generally to a **surgical** instrument and a **method** for **treating** female urinary **incontinence** and in particular to a conical **needle** for facilitating the perforation of **different** layers of tissue, with each tissue layer having a different resistance against perforation.

1 5 Women account for more than 1 1 million of **incontinence** cases. Moreover, a majority of women with **incontinence** suffer from stress urinary **incontinence** (SUI). SUBSTITUTE SHEET (RULE 26) urine to escape. Because SUI is both embarrassing and unpredictable, many WO 00/74594 PCT/USOO/12763 3 undesirable consequence then, the **needle** may penetrate through tissue faster than the surgeon intends, possibly causing the surgeon to lose control of the **needle** and risking the possibility of unintentionally perforating other body structures, such as, bone, organs or blood vessels, with the pointed **needle** tip.

It would be beneficial to provide a **needle** for use in implanting a **mesh** **tape** within a female body to prevent **incontinence** that has a design that provides for a more even resistance for perforating differing types...

...beneficial to simplify the design of the surgical instrument to facilitate the loading of the **tape** onto a **needle** during the operation. In this manner, the instrument would be more receptive to various types of **tapes** , such as synthetic, cadaver tissue and engineered tissue.

SUMMARY OF THE INVENTION

The invention overcomes the deficiencies of the prior art and provides for an improved **needle** for use with an apparatus and a method for the

treatment of female stress urinary **incontinence** . The invention provides a surgical instrument comprising a handle at one end and connecting means at the other end to receive, one at a time, two **curved needle** -like elements, each of which have a **blunt** tip and varying diameter. Each **needle** connects at one end to separate ends of a **tape** intended to 2 0 be implanted within the body. In practice, a first end of the **tape** is passed, via one of the **curved needles** , into the body via the **vagina** at one side of the urethra. The **needle** and first end of the **tape** pass over the pubis and through the abdominal wall.

The second **needle** element connects to the handle and to the second end of the **tape** . The **needle** and second end of the **tape** pass into the body via the **vagina** at 2 5 the opposite site of the urethra from the first end of the **tape** thereby forming a loop or **sling** around the urethra with the **tape** . The second end of the **tape** is extended over the pubis and through the abdominal wall. The **tape** ends are cut at the abdominal wall, and the **tape** is left in the body.

The invention further provides for a single **curved needle** element having a 3 0 **blunt** tip and varying diameter and further provides for a easy attachment means enabling the surgeon to connect both the first and second **tape** ends to the single **needle** to perform the above-stated procedure.

The invention still further provides for a **tape** comprising of a synthetic **mesh** in combination with a natural material whereby the natural material would reside below the urethra to eliminate potential erosion issues.

In one aspect the invention provides a **needle** element having a distal end and a proximal end. The diameter of the **needle** varies increasingly from the distal end to the proximal end. The distal end further defines ...

...is to provide a surgical instrument that requires a reduced maximum force to pass the **tape** through body tissue.

A further object of the invention is to provide a **needle** that requires a more constant force to pass through body tissue.

An advantage of the...

...advantage of the invention is that it provides for a quick connecting means of the **tape** to the **needle** thus allowing for the use of non-synthetic tissue as the supporting element.

These and...

...the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

FIGURE 1 is a side view of the **needle** in one embodiment thereof;

2 5 FIGURE 2a is a side view of two **needles** and a **tape** interconnecting the **needles** ;

FIGURE 2b-d are alternate embodiments of the **tape** and connecting means between the **tape** and **needle** ;

FIGURE 3a is a side view of an alternate embodiment of the **needle** ;
FIGURE 3b-c is an enlarged view of the distal tip of the **needle** shown in Fig.

3a and a means for detachably connecting the **tape** to the **needle** ;
FIGURES 3d-e is an enlarged view of the distal tip of the **needle** shown in Fig. 3a and an alternate means for detachably connecting the **tape** to the **needle** ; FIGURES 3f-g is an enlarged view of the distal tip of the **needle** shown in Fig.

3a and an alternate means for detachably connecting the **tape** to the **needle** ;
FIGURES 4a-g illustrate diagrammatically several surgical steps of the method utilizing two **needles** according to the invention to treat SUI;
FGIURE 4h illustrates the final position of the **tape** within the body before the
tape ends are cut;
FIGURES 5a-g illustrate diagrammatically surgical steps of the method utilizing one **needle** according to the invention to treat SUI; and
FIGURE 5h illustrates the final position of and alternate embodiment of the **tape** within the body before the **tape** ends are cut.

DETAILED DESCRIPTION OF THE INVENTION
Before explaining the present invention in detail...

...for the
2 5 The invention discloses an apparatus and method for treating SUI. A **tape** is passed through pelvic tissue and positioned underneath the urethra, creating a supportive **sling** . The **tape** provides a structure means for tissue ingrowth and thereby provides a newly created body tissue...

...pressure is exerted upon the lower abdomen, such as during a cough or sneeze, the **tape** provides support to the urethra, allowing it to keep its seal and prevent the unwanted discharge of urine.

Referring to Figs. 1 and 2, the surgical instrument comprises a **needle** -like element 1 0 that attaches to a **mesh** **tape** 12. **Needle** element 1 0 defines a certain radius R to perform the surgical procedure discussed herein. The distal end of **needle** element 1 0 terminates at a conical section 14 having a tip 16. Alternate configurations...

...or blood vessel wall tissue as will be appreciated from the method of implanting the **tape** as described below.

The proximal end of **needle** 1 0 terminates in an attachment segment 20 that is adapted to mate and lock...

...of a circle in order to follow substantially the profile of the pubis between the **vagina** and the abdominal wall. For the purposes of the method as will be discussed in...
...distal end 17. This design takes into account, that in the method to implant the **tape** 12, the bending stresses are lowest at distal end 17, while the bending stresses are...

...proximal end 19 is substantial. The design is also 3 0 beneficial in that the **needle** provides a tactile feedback to the surgeon as the

needle passes through differing layers of tissue as opposed to a **needle** having a minimal diameter.

An unexpected result of **needle** 1 0 having a **blunt** tip 16 and a varying
diameter shaft 18 is a reduced maximum force required to perforate a layer of tissue, such as fascia, muscle, fat and skin. Further, after **needle** tip 16 has passed through a tissue layer, the force required by the surgeon to continue the **needle** 1 0 through the tissue layer or subsequent tissue layers having lower resistances to perforation...

...required to penetrate a fascia of a pig (lateral to the linea alba) between a **needle** of the prior art and a **needle** of the present invention. The prior art **needle** was characterized as having a 5 mm constant is diameter and a **needle** tip having a radius of 0.2 mm. The **needle** of the current invention was characterized as having a varying diameter of 3mm to 6 mm from the distal end to proximal end of **curved** shaft 18 and a **needle** tip having a radius of 0.6 mm. The fascia was placed into a testing **device** , and each **needle** **perforated** the fascia at an angle of 900 at a speed of 50mm/min. Table 1...

...force 2 0 needed to penetrate the test tissue.

Table 1
Test No. Prior Art **Needle** **Needle** of the present
Maximum Force (N) invention Maximum
Force (N)
1 7.10 6.41...

...8.98 6.38
s 2.47 0.97
The test results indicate that the **needle** of the present invention reduces the penetration force by 29% over the prior art **needle** .

Needle 1 0 is preferably tubular with a circular cross section and is made from a material that is compatible with the human body. It is also preferred that **needle** 10 is made from a material that can be autoclaved to enable multiple surgical procedures of **needle** 1 0. Preferably, **needle** 1 0 is made from AISI 303 stainless steel. The surface of shaft 18 may be smooth, preferably polished, to facilitate penetration of the soft tissue. Alternatively, the surface of **needle** 1 0 may have a somewhat rougher surface. A rougher surface would result in slightly additional tissue trauma, which in turn stimulates fibroblast activity around the **tape** 12.

Needle 1 0 may be manufactured as a single, continuous unit, or alternatively, curved portion 18...

...as is known to those skilled in the art. is Referring to Figs. 2a-d, **tape** 12 comprises any tissue-compatible synthetic material, or any natural material, including, but not limited...

...a tissue engineered matrix, or a combination thereof. An exemplary synthetic material is PROLENE& polypropylene **mesh** , a **mesh** having a thickness of 0.7 mm and openings of about 1 mm manufactured by...

...and Drug Administration for implantation into the human body. A still

further embodiment of the **tape** 12 is a combination of a synthetic material 1 1 and a natural material 13...

...material 1 1 as shown in Figs. 2b-c. A still further embodiment of the **tape** 12 includes a combination of synthetic material 1 1 and natural material 13, 2 5...

...within a generally central portion of the synthetic material 1 1. One advantage of the **tape** configurations is that natural material 13 is along the center region of **tape** 12 so that after installation of **tape** 12, natural material 13 is positioned below the urethra and eliminates possible erosion issues at the interface of the urethra and **tape** . Natural material 13 may be connected to the synthetic material 1 1 by means of sewing, a bio-compatible glue, cell culturing techniques or other known means.

Tape 12 may be of any convenient shape that suits the intended purpose of the invention...

...and the length would be dependent upon the size of the female undergoing the procedure. **Tape** 12 may be single or double ply, generally planar in structure, or tubular (Fig. 2d...

...provide additional supporting strength and more surface area on which tissue fibers may attach.
Moreover, **tape** 12 may consist of different types of material, such as a bioabsorbable and non-bioabsorbable material. **Tape** 12 may also be coated with an antimicrobial additive to prevent or minimize infection and a lubricous coating, for example, a bioabsorbable hydrogel, to facilitate the **tape** passing through the tissue as discussed below. Preferably, **tape** 12 is covered by a removal plastic sheath as disclosed in U.S. patent no. 5,899,909. The **tape** may also be made radio-opaque and/or of a contrasting color to the body tissue to allow for future diagnostic visualization.

In one embodiment **tape** 12 may be attached to **needle** segment 20 by means of tying, gluing or other suitable attaching means. Preferably, a biocompatible heat shrink tube fixes **tape** 12 onto **needle** portion 20, Fig. 2a. In a further embodiment, as shown in Figs. 2b-d and 3a-g, **needle** 10 and **tape** 12 are 2 0 further configured to enable easy attachment and detachment of **tape** 12 to and from **needle10bythesurgeonduringtheoperation** . Thisembodimentallowsfortheuse of a single **needle** for the procedure. This embodiment also allows for the use of a **tape** constructed, at least in part, of natural materials, which are otherwise not suitable in the...

...to slidably receive connecting tabs 32 and 32a that are attached at either ends of **tape** 12. Preferably, slot 40 extends through curved shaft 18 and is further located at the distal end 17 of **needle** 1 0 so that **tape** 12 may be disconnected from **needle** 3 0 10 immediately after **needle** 10 penetrates the abdomen wall, discussed below.

0 Tab 32 may be constructed from any...

...expand and securely fasten tab 32 within slot 40. Tab 32 may be attached to **tape** 12 in any number of convenient methods as previously discussed and well known to those...

...is well known in the art.

Figs. 3f-g illustrate an alternate embodiment of affixing **tape** 12 to the distal end 17a of **needle** 1 0. A detachable **blunt** tip 16a having a connecting post 15, attaches to the distal end 17a by means...

...end 17a further defines a groove 23 of varying depth to allow the end of **tape** 12 connected to post 15 to transition from within hole 15a to the exterior of **needle** 1 0. Along with the embodiment of Figs. 3a-e, this embodiment allows the surgeon to affix **tape** 12 to **needle** 1 0 just prior to the surgical procedure. One advantage is the ability to use a 2 0 **tape** 12 constructed of, at least in part, a natural material.

As would be appreciated by one skilled in the art, there exist multiple means for detachably connecting the **tape** to the **needle** . Alternate embodiments would include tying the ends of **tape** 12 to form a knot and securely inserting the knot into a V-type groove in shaft 18. Alternately, a diagonal slit in shaft 18 could accept **tape** 2 5 12 or a suture extending from **tape** 12.

The surgical procedure for implanting **tape** 12 using two **needles** is shown in Figs. 4a-g. In the figures the relevant parts of the female lower abdomen are disclosed, the **vagina** being 50, the uterus 52, the urethra 54, the pubic bone 56, the urinary bladder 58 and the abdominal wall 60. The first **needle** 1 Oa penetrates the 3 0 **vaginal** wall, an incision having first been made in the wall to create a tissue flap.

The **needle** is attached to handle 21, and the surgeon **guides needle** 1 Oa through the **vaginal** wall and through the soft tissue on one side of the urethra 54, the **needle** then according to Fig. 4b being passed close to the back of the pubic bone...

...56. An incision can be made through the abdominal wall for the passage of the **needle** therethrough. Handle 21 is disconnected from **needle** 1 Oa, Fig. 4c, and the **needle** 1 Oa along with **tape** 12 are withdrawn from the abdomen wall by means of forceps, Fig. 4d.

Referring to Fig. 4e, **needle** 10b is now attached to handle 21, and **needle** 1 Ob is passed through the incision in the **vaginal** wall as **guided** by the surgeon and through the soft tissue on the opposite side of the urethra than the previous end of **tape** 12. **Needle** 1 Ob passes close to the back of the pubic bone, through additional layers of...

...pubic bone and withdrawn, Fig. 4g.

Figs. 5a-g illustrate an alternate method of implanting **tape** 12 using a single **needle** 1 0. **Tape** 12 is attached to **needle** 1 0 by means of tab 32 (not shown).

Needle 1 0 penetrates the **vaginal** wall, an incision having first been made in the wall to create a tissue flap. The surgeon **guides needle** 1 0 through the **vaginal** wall and through the soft tissue on one side of the urethra 54, the **needle** then according to 2 0 Fig. 5b being passed close to the back of the...

...be made through the abdominal wall for the passage of the distal end 17 therethrough. **Needle** 10 only continues to pass through the abdominal wall until tab 32 may be disconnected...

...side in which tab 32 was inserted. Tab 32 may then be cut off and **tape** 12 may be pulled out of the abdominal wall to allow the surgeon additional lengthfortheprocedure. **NeedlelOisthenremovedfromthepatientalongthe** same path that it entered, but in the opposite direction, Fig. 5d. Alternatively, **needle** 1 0 may be disconnected from handle 21 and pulled out through the abdomen wall 60 using forceps as discussed with regard to the two **needle** procedure.

Claim

A **surgical** instrument for **treating** female urinary stress **incontinence** comprising:

a) a **tape** for implanting into the lower abdomen of a female to provide support to the urethra; and

b) a **curved** **needle** -like element defining in part a curved shaft having a distal end and a proximal...

...varies from the proximal end to the distal end, and means for attaching to the **tape** .

2 The surgical instrument of claim 1 wherein the distal end of the **needle** has a diameter from about 3mm to about 5mm.

1 5

3 The surgical instrument of claim 1 wherein the proximal end of the **needle** has a diameter from about 5mm to about 6mm.

4 The surgical instrument of claim 1 wherein the **tape** comprises connecting 2 0 means and the **needle** comprises attaching means for detachably accepting the connecting means.

5 The surgical instrument of claim...

...7 wherein the blunt tip has a radius of about 0.6 mm.

9 A **surgical** instrument for **treating** female urinary stress **incontinence** comprising a **tape** for implanting into the lower abdomen of a female to provide support to the urethra, the **tape** defining a first end and a second end of a synthetic material and the **tape** further comprising a natural material.

10 The surgical instrument of claim 9 wherein the natural...

...and a tissue engineered matrix.

11 The surgical instrument of claim 9 further comprising a **curved** **needle** -like element defining in part a curved shaft having a distal end and a proximal end, and means for attaching to the **tape** .

12 The surgical instrument of claim 1 1 wherein the **curved** **needle** element further defines a diameter that decreasingly varies from the proximal end to the distal...

...2 0

13 The surgical instrument of claim 12 wherein the distal end of the **needle** has a diameter from about 3mm to about 5mm.

14 The surgical instrument of claim 12 wherein the distal end of the **needle** has a 2 5 diameter from about 5mm to about 6mm.

15 The surgical instrument of claim 12 wherein the **tape** comprises connecting means and the **needle** comprises attaching means for detachably accepting

the attaching means.
3 0
- 16

16 The surgical...

...18 wherein the blunt tip has a radius of about 0.6 mm.
20 A **surgical** instrument for **treating** female urinary stress **incontinence**
comprising:
a) a **tape** for implanting into the lower abdomen of a female to provide is support to the urethra having connecting means; and
b) a **curved** **needle** -like element defining in part a curved shaft having a
distal end and a proximal...

...distal end

26 The surgical instrument of claim 25 wherein the distal end of the **needle** has a diameter from about 3mm to about 5mm.

27 The surgical instrument of claim 25 wherein the proximal end of the **needle** has a diameter from about 5mm to about 6mm.

28 A method for treating female urinary **incontinence** comprising the steps of: a) providing a first and second **curved** **needle** -like element, each defining
a **curved** shaft having a distal end and a proximal end, and a diameter that decreasingly varies from the proximal end to the distal end and a **tape** attached to both **needle** elements;
b) passing the first **needle** and **tape** into the body via the **vagina** and on
one side of the urethra and extending the **tape** over the pubic bone and through the abdomen wall;
c) passing the second **needle** and **tape** into the body via the **vagina** and
on the opposite side of the urethra than the first **needle** and extending
2 0 the **tape** over the pubic bone and through the abdomen wall, creating a supporting **sling** below the urethra; and
d) leaving the **tape** implanted in the body.

29 A method for treating female urinary **incontinence** comprising the steps of: 2 5 a) providing a **curved** **needle** -like element defining in part a curved shaft
having a distal end and a proximal end and a **tape** attached thereto; and
b) passing the **needle** and **tape** into the body via the **vagina** to form a
sling around the urethra; and
3 0 c) leaving the **tape** implanted in the body. - 18
30 A method for treating female urinary **incontinence** comprising the steps of: a) providing a **curved** **needle** -like element defining in part a curved shaft;
b) attaching a **tape** to the **needle** ;
c) passing the **needle** and **tape** into the body;
d) attaching the **tape** to the **needle** and passing the **needle** and **tape** into

the body to form a **sling** around the urethra the and e) leaving the **tape** implanted in the body.
/23
14
16
18 17
1
1
1
1 A*@ft...

...the title must be short and precise, preferably 2-7 words. A new title is:
Surgical Instrument For **Treating** Female Urinary **Incontinence**
Form PCT/ISA/210 (extra sheet) (July 1998)

40/3,K/220 (Item 220 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

good!

00406501 **Image available**
SUTURE **INSERTION** DEVICE **FOR THE TREATMENT OF URINARY STRESS** INCONTINENCE
DISPOSITIF D'INTRODUCTION DE SUTURE POUR LE TRAITEMENT DE L' INCONTINENCE **URINAIRE D'EFFORT**

Patent Applicant/Assignee:
INFLUENCE MEDICAL TECHNOLOGIES LTD,
SOHN Ze'ev,
Inventor(s):
SOHN Ze'ev,

Patent and Priority Information (Country, Number, Date):
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Priority Application: IL 118617 19960610; IL 119151 19960828
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AL AM AT AT AU AZ BA BB BG BR BY CA CH CN CU CZ CZ DE DE DK DK EE EE ES
FI FI GB GE GH HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK
MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SK TJ TM TR TT UA UG US UZ VN
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"needles, at least one of which is curved"

SUTURE **INSERTION** DEVICE **FOR THE TREATMENT OF URINARY** STRESS INCONTINENCE
DISPOSITIF D'INTRODUCTION DE SUTURE POUR LE TRAITEMENT DE L' INCONTINENCE **URINAIRE D'EFFORT**
Fulltext Availability:
Detailed Description
Claims

English Abstract
...thread through a curved channel in a bone. The curved channel is formed by a **curved needle**, having a head and a shank, driven into the bone at one point and emerging from the bone at another point. The **needle** preferably includes superelastic material. The **needle** is inserted into the bone using an insertion tool, into which the **needle** is loaded and which forces the **needle** into the bone, either by percussive impact or, alternatively, by drilling into the bone, wherein the head of the **needle** includes a drill bit. A suture is threaded through the curved channel, and the ends of the suture are tied together to suspend tissue or a **sling** to the bone. Alternatively, two **needles**, at least one of which is curved, may be used, wherein each of the **needles** is adapted to form and be removed from a respective partial channel in the bone...

Detailed Description
SUTURE INSERTION **DEVICE** FOR THE TREATMENT OF URINARY STRESS **INCONTINENCE**

RELATED APPLICATIONS
This application is related to and claims priority from Israel patent application no...

...THE INVENTION
The present invention relates generally to surgical devices and methods, and specifically to **devices** and methods for fastening a **suture** to a bone, particularly useful in treating female urinary stress **incontinence** .

I 0 BACKGROUND OF THE INVENTION
Urinary stress **incontinence** , i.e., the inability to control urination from the bladder, affects more than ten percent...

...neck and proximal urethra moving away from the posterior wall of the pubic bone. Various **surgical treatments** , known in the art, 1 5 attempt to correct the condition by returning the bladder...
...by reference, describes a surgical stapler device and staples for use in treating urinary stress **incontinence** , as well as a method of using them. The staples are preferably formed of an...

...and loaded into the barrel of the stapler. The loaded stapler is inserted into the **vagina** of a female subject, and the staple is ejected through the **vagina**] wall into the pubic bone.

Once inside the bone, the staple resumes its curved shape...

...WO96/18352, and incorporated herein by reference, describes an 3 0 improved staple and thread **assembly** , for surgical use as described above. The staple is made of a shape memory material...describes surgical fasteners, tools and procedures based on superelastic materials. The fasteners include, inter alia, **curved needles** and ring clips, formed of superelastic material, for insertion into soft body tissues.

Such fasteners...

...the bone itself
Other surgical methods known in the art for treatment of urinary stress **incontinence** do 0 not require that a staple, screw or anchor remain in the bone. One such method is the bone fixation technique for **needle** suspension of the proximal urethra and bladder neck, as described, for example, by Leach in...

...May, 1988), pages 388-390, which is incorporated herein by reference. In this method, a **needle** guiding a suture is driven through the tubercle on one side of the pubic bone. The **needle** is then removed, leaving the suture in place, A second 5 suture is similarly inserted...

...to suspend the bladder neck. Although this method is felt to be effective in treating **incontinence** , it requires major, open abdominal surgery to expose the pubic bone and
.D
insert the sutures.

Another method for suspending the bladder neck to treat urinary stress **incontinence** is the pubovaginal fascial **sling** technique, as described, for example, by Blaivas, et al., in The Journal of Urology 145 (June,

1991), pages 1214-1218, which is incorporated herein by reference. In this method, a **strip** of endopelvic fascia other material is dissected and is then passed under the bladder neck...such as a porcine graft manufactured by Ethicon, a division of Johnson and Johnson. This **sling** technique is particularly
2
useful in treating complicated c-ases of stress **incontinence** , such as Type III **incontinence** (also termed intrinsic sphincteric damage) that are not amenable to treatment by a simple **needle** bladder suspension, but it involves a complicated procedure and major, open abdominal surgery to dissect and secure the fascia or other materials as described. In addition, the **sling** procedure is recommended for all types of urinary stress **incontinence** due to its established long term success rate as a treatment for **incontinence** .

SUMMARY OF THE INVENTION
It is an object of the present invention to provide improved...

...to remain in the bone after insertion.

In another aspect of the present invention, the **device** for inserting and securing the **suture** thread includes a lumen, through which a drilling device is used to create a channel...

...aspect of the present invention, the devices and methods are used in 0 minimally-invasive **surgical** **treatment** of urinary stress **incontinence** .

In preferred embodiments of the present invention, a **curved** **guide** **needle** , having a tip and a shank, is driven into a bone using an insertion tool. The **needle** creates a **curved** channel through the bone, including closely spaced entrance and exit holes, wherein the exit hole ...

...bladder neck suspension, as described hereinbelow.

In some preferred embodiments of the present invention, the **needle** is withdrawn from the channel, preferably using a grasping and withdrawing tool designed for this...

...therefrom. The suture thread is fed through the channel, preferably with the aid of the **needle** and simultaneously with the withdrawal of the **needle** . Alternatively, the thread may be fed through the channel independently of the **needle** , after the **needle** has been withdrawn. No staple, screw ...the present invention, the insertion tool is an insertion 3 5 gun, which propels the **needle** into the bone by means of a sharp impact, In some of these preferred embodiments, the thread is attached to the **needle** , for example by feeding the thread through one or more holes in the shank of the **needle** , as described in the above mentioned patent applications and the 5,520,700 patent. Alternatively, the thread is
3
attached to the **needle** by crimping the shank of the **needle** around an end of the thread. The **needle** is then propelled into the bone using the insertion gun. After insertion, the tip of the **needle** protrudes through the exit hole. The **needle** is grasped by its tip and pulled through the exit hole, thus threading the thread through the entire channel. The

needle is then detached from the thread, which remains in the bone.

In other preferred embodiments of the present invention, the **needle** includes a hollow lumen therethrough and has a detachable head, which closes the end of the lumen at the **needle** 's tip. The thread is attached to the head of the **needle** and passes through the lurnen and out the opposite end of the **needle** . After insertion of the **needle** , as described above, the head of the I 0 **needle** protrudes through the exit hole. The head is grasped and pulled away from the shank of the **needle** , preferably using a grasping and detaching tool as described above, pulling the thread after it through the channel. The shank of the **needle** is then withdrawn from the channel by
pulling it back in the direction from which...
...back into the channel.

In other preferred embodiments of the present invention, in which the **needle** has a detachable head, as described above, the shank of the **needle** is not withdrawn from the channel after detachment of the head. Rather, the shank remains...

...the thread is passed and secured.

In still other preferred embodiments, as indicated above, tile **needle** is propelled into the bone without connecting the thread to the **needle** . After the **needle** has created the channel through the bone, it is withdrawn, and the thread is threaded...

...the channel.

In the preceding preferred embodiments of the present invention, the impact of the **needle** as it creates the exit hole, coming out of the channel, may cause the bone...

...the site of the hole. Therefore, in another preferred embodiment of the present invention, two **needles** , of which at least one is preferably curved, are propelled into the bone at two adjacent sites. The **needles** are oriented so that each creates a partial channel in the bone, wherein the partial...

...inside the bone to form a single, full channel, entering and exiting the bone. The **needles** are then withdrawn from the bone, and the thread is threaded through the channel.

In other preferred embodiments of the present invention, the **needle** comprises **curved** elastic material and includes a miniature drill bit, as is known in the art, at...

...the flexible rotary drive wire 5 passing through a lumen in the shank of the **needle** . Preferably, the insertion tool comprises a rotary drive mechanism, which is coupled to the drive...

...the end of the shank opposite to the tip.

4
In order to drive the **needle** into the bone, the tip of the **needle** is pressed against the bone surface at a desired location and the rotary mechanism is...

...the bone cortex and into the soft medulla of tile bone. Within the medulla, the **curved** shape of the **needle** causes the tip of the **needle** to **curve** back toward the bone cortex; wherein the drill bit then drills the second, exit hole back out of the bone.

Preferably, the **needle** is then drawn back, out of the bone, through the entrance hole, and the suture...

...has a radial diameter that is comparable to or smaller than the diameter of the **needle** , so that the drill bit can be drawn back out of the bone in the same direction as the **needle** . Alternatively, if the diameter of the drill bit is larger than that of the **needle** , the flexible drive wire is released from the rotary mechanism, so that the drill bit and drive wire may be pulled out together through the exit hole, while the **needle** is withdrawn through the entrance hole.

In
Further alternatively, the **needle** and the rotary drive wire may be detached from the insertion tool and pulled out...

...these preferred embodiments of the present invention, the suture thread is preferably attached to the **needle** before pulling the **needle** out of the bone, for example by feeding,the thread through a hole in the shank of the **needle** , as described above, so as to feed the thread through the channel simultaneously with removing the **needle** .

In other preferred embodiments of the present invention, in which the **needle** comprises a drill bit at its tip as described above, after the channel has been...

...are detached from the rotary mechanism and pulled out forward through the exit hole. The **needle** is also detached from the insertion tool, and the tool is removed, leaving the **needle** inside the channel in the bone. The suture thread is then fed through the now-empty iumen of the **needle** , which remains inside the bone permanently.

In some preferred embodiments of the present invention, the **needle** is made of superelastic material known in the art, such as Nitinol. The **needle** is preferably **straightened** for loading in the insertion tool, and then curves forcefully as it is ejected out...

...throuah hard tissue, such as bone.

In other preferred embodiments of the present invention, the **needle** is made of **curved** , substantially rigid material. Preferably, the insertion tool has a curved barrel, in order to accommodate the **needle** and drive it with the required force through tile bone.

3 5 In some preferred embodiments of the present invention, the **needle** , thread and insertion **tool** are used to secure a **suture** thread to the pubic bone, for treatment of urinary stress **incontinence** . Preferably, at least two sutures are attached to the bone in this manner, at opposite ...

...the pubic bone at opposite sides of the urethra, are used in a minimally-invasive **sling** suspension procedure, to secure the ends of a pubovaginal **sling** , which has been inserted under and thus suspends the

bladder neck and/or the urethra. Preferably, the **sling** comprises bovine pericardium, or alternatively, Gore-tex fabric or fascia dissected from another part of...

...that the entire procedure is performed transvaginally, without any abdominal incision and without 0 substantial **vaginal** wall or endopelvic fascia dissection. Alternatively, the procedure may be performed by first dissecting the **vaginal** wall and endopelvic fascia to enter the retropubic space and expose the pubic bone, prior to insertion of the **sutures** .

Alternatively or additionally, the **devices** and methods described here may be used in
other surgical procedures,
5 There is therefore...

...apparatus for inserting a suture thread through a curved channel in a bone, including a **curved** **needle** , having a head and a shank, and an insertion tool, into which the **needle** is loaded, and which forces the **needle** into the bone, wherein the **needle** is adapted to form the **curved** channel, passing through the bone.

0 Preferably, the **needle** is further adapted to be removed from the **curved** channel.

Preferably, the **needle** includes superelastic material and is substantially straightened when loaded into the tool.

Further preferably, the head of the **needle** is asymmetrical.

Alternatively, the tool includes a **curved** barrel, into which tile **needle** is loaded.

5 Preferably, the **needle** has a predetermined outer diameter, and the tool includes a generally **straight** barrel into which the **needle** is loaded, the barrel having an inner diameter substantially greater than the outer diameter of the **needle** , such that the **needle** is partially **straightened** when loaded into the barrel. The **needle** is forced into the bone at an angle dependent on the difference between the inner diameter of the barrel and the outer diameter of the **needle** .

Preferably, the **needle** includes a hole, through which the thread is inserted.

Alternatively, the thread is crimped to the **needle** .

Preferably, the head of the **needle** is detachable from the shank, and the shank includes an outer wall, which defines and...

...the thread is passed.

Preferably, the insertion tool is an insertion gun, which propels the **needle** into the bone by percussive impact.
Alternatively, the head of the **needle** includes a drill bit, and the insertion tool includes a rotary drive mechanism, which causes...

...of applying axial pressure during drilling. Preferably, there is a

flexible drive wire within the **needle** , which couples rotary motion from the drive mechanism to the drill bit. Further preferably, the insertion tool includes a retractable barrel, into which the **needle** is loaded.

There is further provided, in accordance with another preferred embodiment of the present...

...apparatus for inserting a suture thread through a curved channel in a bone, including.

two **needles** , at least one of which is curved; and
one or more insertion tools, into which the two **needles** are loaded, and which propel the

Further alternatively, an unthreaded **straight needle** may be used in place of **needle** 140 for producing channel 146 in the bone. The **needle** is then removed, and a thread is passed throuall the channel and through eye 136...

...of the present invention, tile devices and methods described above are used in minimally-invasive **surgical treatment** of urinary stress **incontinence** in a female subject.

Fig. 12 is a schematic, partly sectional representation of such a...

...tool I 10, insertion gun 30 or insertion gun 40, is preferably inserted into tile **vagina** 184 of a female subject 180. The tool or gun is used in conjunction with a suitable **needle** , in accordance with preferred embodiments of the present invention described above, to create two channels...

...below, relative to the view shown in Ficy. 9), showing the next steps in the **surgical treatment** .

Pubic bone 170 includes right and left portions separated by the symphisis pubis 186 and...

...insertion can be 2 0 performed directly on the posterior pubic bone or through the **vagina**] wall without any surgical cuts.

In one preferred embodiment of the present invention, the ends...

...prolapsed tissue in tills manner effectively suspends the bladder neck and alleviates the subject's **incontinence** , without the necessity for open abdominal surgery. This procedure, by providing a distance between the...four anchors within the bone.

In another preferred embodiment of the present invention, a pubovaginal **sling** , preferably comprising bovine pericardium, is 'Inserted below the proximal urethra and bladder neck.
Alternatively, as is known in tile art, the **sling** may comprise fascia dissected from the patient's body, or Gore-tex fabric or other synthetic material. The ends of the **sling** are secured to the posterior side of the pubic bone by tying together the ends of threads 22 around the ends of the
C
sling or suturing them to tile ends of the **sling** , thereby suspending the subject's bladder neck and alleviating **incontinence** , similarly without the necessity for open abdominal surgery.

1 7
It will be appreciated that...

Claim
... Apparatus for inserting a suture thread through a curved channel in a bone, comprising:
a **curved needle** , having a head and a shank; and
an insertion tool, into which the **needle** is loaded, and which forces the **needle** into the bone, such that the **needle** forms the **curved** channel, passing through the bone.

2 Apparatus according to claim 1, wherein the **needle** is adapted to be removed from the curved channel.

3 Apparatus according to claim I or 2, wherein the head of the **needle** is asymmetrical.

4 Apparatus according to any of claims 1-3, wherein the **needle** comprises superelastic 0 material.

5 Apparatus according to claim 4, wherein the **needle** is substantially **straightened** when loaded into the tool.

6 Apparatus according to claim 4, wherein the **needle** has a predetermined outer diameter,
ZD
and wherein the tool comprises a generally **straight** barrel into which the **needle** is loaded, the 5 barrel having an inner diameter substantially greater than the outer diameter of the **needle** , such that the **needle** is partially **straightened** when loaded into the barrel.

7 Apparatus according to claim 6, wherein the **needle** is forced into the bone at an angle
C)
dependent on the difference between the inner diameter of the barrel and the outer diameter of the **needle** . 0 8. Apparatus according to any of claims 1-4, wherein the tool comprises a **curved** barrel, into which the **needle** is loaded.

9 Apparatus according to any of the preceding claims, wherein the **needle** comprises a hole, throucrh which the thread is inserted.
ID

10 Apparatus according to any of the preceding claims, wherein the thread is crimped to the
In Z.)
5 **needle** . II. Apparatus according to any of tile preceding claims, wherein the head of the **needle** is detachable from the shank.

12 Apparatus according to any of the preceding claims, wherein...

...of the preceding claims, wherein the insertion tool comprises an insertion gun, which propels the **needle** into the bone by percussive impact.

14 Apparatus according to any of claims 1-12, wherein the head of the **needle** comprises a drill bit, and wherein the insertion tool comprises a rotary drive mechanism, which...

...1 9
. Apparatus according to claim 14, and comprising a flexible drive wire within the **needle** , which couples rotary motion from the drive mechanism to the drill bit.

16 Apparatus according...

...claim 14 or 15, wherein the insertion tool comprises a retractable barrel, into which the **needle** is loaded.

17 Apparatus for inserting a suture thread through a curved channel in a bone, comprising:
two **needles** , at least one of which is curved; and
one or more insertion tools, into which the two **needles** are loaded, and which propel the
needles into the bone,
wherein each of the **needles** is adapted to form and be removed from a respective partial I 0 channel in...

...passing through the bone.

18 Apparatus according to claim 17, wherein the at least one **curved needle** comprises superelastic material.

19 Apparatus according to claim 17 or 18, wherein the one or...

...1

20 Apparatus according to any of claims 17-19, wherein one of the two **needles** comprises
1-1)
an eye, through which the other of the **needles** passes.
21 Apparatus according to any of claims 17-20, wherein one of the two **needles** comprises a suture passer, which inserts a suture into the channel, where it is received by the other of the two 0 **needles** .

22 Apparatus according to claim 21, wherein the suture passer comprises a sleeve and a...

...or 24, wherein forming the curved channel through the bone comprises forcing at least one **curved needle** through the bone and removing the **needle** from the bone.

26 A method accordin(y to claim 25, wherein forcing the **needle** through the bone comprises percussively propelling the **needle** through the bone.
2 0
. A method according to claim 25 or 26, wherein removing the **needle** from the bone comprises pulling all or a part of the **needle** through the channel in the direction in which it was propelled thereinto.

28 A method according to and of claims 25-27, wherein removing the **needle** from the bone comprises withdrawing all or a part of the **needle** from the channel in the direction from which it was forced thereinto.
29 A method according to any of claims 25-28, wherein the at least one **needle** comprises a head part and a shank part, and wherein removing the **needle** from the bone comprises detaching the head part from the shank part. 0 30. A...

...25-29, wherein inserting the thread through the
channel comprises attaching tile thread to the **needle** ,
C

31 A method according to claim 23 or 24, wherein forining the **curved** channel comprises propelling a **curved needle** , having a central lurnen, through the bone, and wherein inserting the
,D
thread through the...method according to claim 34, wherein forming the

two partial channels comprises 5 forcing two **needles** into the bone, at least one of which **needles** is **curved** .

36 A method according to claim 35, wherein inserting the thread through the channel

It...

...into one of the two partial channels usin(a first one of the two
n
needles , and pulling the thread through the channel using a second one of the two **needles** .

37 A method according to claim 36, wherein passing the thread using the first one of the 0 two **needles** comprises passing the first one of the **needles** through an eye in the second one of the **needles** .

38 A method for treating **incontinence** in a female subject, comprising: transvaginally inserting first and second suture threads through the pubic...

...threads so as to suspend tissue to the pubic bone.
21
. A method for treating **incontinence** in a female subject, comprising: transvaginally forming a curved channel, comprising generally adjacent entrance and...

...second suture threads are inserted on opposite sides of the subject's urethra;
inserting a **sling** transversely below the subject's urethra, so that the ends of the **sling** are in respective proximity to the first and second sutures in the pubic bone; and 1 0 tying the threads, so as to secure the ends of the **sling** to the pubic bone.
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40/3,K/225 (Item 225 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

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SURGICAL **INSTRUMENT FOR** TREATING **FEMALE URINARY** INCONTINENCE
INSTRUMENT CHIRURGICAL POUR LE TRAITEMENT DE L' INCONTINENCE **URINAIRE FEMININE**

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SURGICAL **INSTRUMENT FOR** TREATING **FEMALE URINARY** INCONTINENCE
INSTRUMENT CHIRURGICAL POUR LE TRAITEMENT DE L' INCONTINENCE **URINAIRE FEMININE**

Fulltext Availability:
Detailed Description
Claims

English Abstract
The invention relates to a **surgical** instrument and a **method** for **treating** female urinary **incontinence** . The instrument comprises a shank (10) having a handle (11) at one end thereof, and two **curved** needle -like elements (21A, 21B) which are connected at one end thereof each with one end of a **tape** (26) intended to be implanted into the body. These elements can be connected one at...

...portion of the shank and are intended to be passed into the body via the **vagina** , each element being dimensioned to extend from the inside of the **vaginal** wall over the back of the pubic bone to the outside of the abdominal wall. When practising the method the **tape** (26) is passed into the body via the **vagina** (28) first at one end and then at the other end at one side and the other, respectively, of the urethra (30) to form a loop around the **vaginal** wall. The **tape** is extended over the pubis (31) and through the abdominal wall (32) and is tightened. Then, the **tape** ends are cut at the abdominal wall, and the **tape** is left in the body.

French Abstract
La presente invention concerne un instrument chirurgical destine au traitement de l' **incontinence** urinaire chez la femme. L'instrument est constitue d'une queue (10) munie d'une...

...constituer une partie extreme incurvee de la queue, sont prevus pour etre introduits par le **vagin** dans le corps, chaque element etant dimensionne pour etre dispose au dessus de la face arriere de l'os pubien, de l'interieur a l'exterieur de la paroi **vaginale** . Le procede consiste a introduire par le **vagin** (28) le ruban (26) dans le corps, d'abord sur l'une des extremites puis...

...de part et d'autre de l'uretre (30) de facon a entourer la paroi **vaginale** d'une boucle, puis a faire passer le ruban au dessus du pubis (31) et...

Detailed Description

TITLE OF THE INVENTION: **Surgical** instrument for **treating** female urinary **incontinence**

The invention relates to a **surgical** instrument and a **method** for **treating** female urinary **incontinence** , i.e.

incapacity of controlling the discharge of urine.

Urinary **incontinence** may be caused by a defect function in the tissue or ligaments connecting the **vaginal** wall with the pelvic muscles and pubic bone.

US-A-5 112 344 describes a method for treating female urinary **incontinence** without the necessity of opening the abdomen, which would require hospital care for may be four 10 days. In this method a **tape** is passed into the body at each side of the urethra and is implanted between the **vaginal** wall and the abdominal wall extending over the pubis. The **tape** is tightened in order to bring the **vaginal** wall and the urethra into correct position in relation to the pubis and 15 is left in the body in order that fibrous tissue shall develop around the **tape** , said fibrous tissue functioning as a supporting ligament in the soft tissue. The **tape** is removed from the body when such fibrous tissue has developed, which takes about two...

...other end thereof said portion being intended to be passed into the body via the **vagina** .

The result obtained by such surgery is not always satisfactory due to the fact that fibrous tissue will not develop sufficiently since the soft tissue between the **vaginal** wall and the abdominal wall is in bad cond'Ltion.

The object of the invention...

...features of claim 1.

The invention also provides a method for treatment of female urinary **incontinence** in accordance with claim 17.

Also in this method a **tape** is passed into the tissue between the **vaginal** wall and the abdominal wallbut the **tape** is left permanently in the body to provide itself, as an artificial ligament, the reinforcement...19

of further reduced diameter joining the threaded portion 18, end portion 19 forming a **guide** pin at said other end of the shaft. Portions 18 and 19 are received in...

...The surgical instrument also includes an exchangeable and disposable element 21 which will be termed **needle** . It is attached to the shank at a straight portion at one end of the **needle** and extends over substantially a quarter of a circle to the other, free end thereof in order to follow substantially the profile of the pubis between the **vagina** and the abdominal wall. The **needle** has circular cross section and has a smooth, preferably polished outside surface. It **tapers** slightly towards the free end thereof where the **needle** forms a point 22 by being faceted but it can als be blunt-ended and...

...use of the surgical instrument will show which embodiment is to be preferred. The disposable **needle** shall be made either of a tissue compatible plastics, such as polycarbonate, or of steel or a similar material. For attachment of **needle** 21 to shank 10 the **needle** has at said one end thereof where the **needle** forms a **straight** portion to be received at said portion in socket 14, an 35 axial blind hole...

...said hole having a threaded portion 23 and inwardly thereof a narrower, cylindrical portion 24. **Guide** pin 19 is dimensioned to be guidingly received by said latter portion when the threaded portion 18 for attaching **needle** 21 to the rest of the surgical instrument is screwed into threaded portion 23 of rotation of knob 16, the end surfaces of the shank and the **needle** being pressed against each other. The **needle** should be oriented in a predetermined rotational position in relation to the shank; it should...

...the shank being received in a mating recess 25 in the outside surface of the **needle** .

Portion 23 of **needle** 21 instead of being threaded can be dimensioned such that the threaded portion 18 of shaft 15 cuts a thread in the plastics of the **needle** when being screwed thereinto.

When the two parts of the surgical instrument are screwed together...

...the method of the invention.

When the method according to the invention is practised two **needles** 21A and 21B of the embodiment described shall be connected one- at each end of a **tape** 26, Fig. 4. In the preferred embodiment the **tape** end is glued to the **needle** but the connection can be effected also by the **tape** being passed through an eye 27, Fig. 3, in the **needle** adjacent the end attached to the shank or by the **tape** end being connected by

ultrasonic welding to the **needle** or being baked into the plastics material of the **needle** at injection molding thereof.

The **tape** should be a woven **tape** having apertures between weft and warp of the order of 0.1 mm in order that fibroblasts shall be able to grow into the **tape** for anchoring of the **tape** in surrounding tissue. A suitable material for the **tape** is polypropylene which also can be coated with a fibroblast stimulating substance, e.g. an enamel matrix derivative. Preferably the **tape** has a width of 8 to 10 mm and a thickness of about 1 mm.

When the surgery for implanting the **tape** shall start one **needle** 21A is attached to shank 10, the other **needle** 21B hanging loosely in **tape** 26 as shown in Fig. 4.

. In Figs. 4 to 11 the relevant parts of the female lower abdomen is disclosed diagrammatically, the **vagina** being designated 28, the urinary bladder 29, the urethra 30, the pubic bone 31, and the abdominal wall 32.

The first step of the surgery for implanting **tape** 26 is disclosed in Fig. 4 and comprises penetration of the **vaginal** wall by **needle** 21A a cut having first been made in said wall, and also penetration of the soft tissue at one side of urethra 30, the **needle** then according to Fig. 5 being passed close to the back of the pubic bone...

...bone. A cut can be done through the abdominal wall for the passage of the **needle** therethrough but if the **needle** is pointed it may be sufficient to let the **needle** penetrate into the abdominal wall from the inside thereof and to make a registering cut...

...abdominal wall on the outside thereof.

The shank of the instrument is now disconnected from **needle** 21A, Fig. 6, by rotating shaft 15 at knob 16 so that the threaded portion 18 of the shaft is unscrewed from the threaded portion 23 in **needle** 21A said **needle** then being withdrawn from the abdominal wall by means of forceps and **tape** 26 being pulled into and through the tissue as illustrated in Fig. 7.

The other **needle** 21B is now attached to the shank, Fig. 8, and is passed through a cut in the **vaginal** wall to pass through the soft tissue at the other side of urethra 30. **Needle** 21B is passed through the abdominal wall, Fig. 9, and then, after having been disconnected...

...Fig. 10, all in the same way as in the earlier procedure with neede 21A.

Tape 26 is now located at each side of urethra 30 as shown in Fig. 10 and is tightened with the loop formed by the **tape** located on the inside surface of the **vaginal** wall, Fig. 11. The surplus of the **tape** at the outside of the abdominal wall is cut off. Then, the **tape** is left as an

implant in the body to form an artificial ligament attached to...

...support for urethra
as required in order to restore the urinary continence.

Another kind of **tape** which may be used in the method according to the invention can be more closely woven than the **tape** mentioned above and can be of such material that the **tape** after a shorter or longer period will be completely resorbed. By the development of fibroblast proliferation stimulated by the **tape** the reinforcement of the tissue 15 required in order to restore the urinary continence will...

Claim
1. **Surgical** instrument for **treating** female urinary **incontinence** , comprising a shank (10) having a handle (11) at one end thereof and a curved...

...end end thereof said portion being intended to be passed into the body via the **vagina** ,
c h a r a c t e r i z e d in that two **curved** **needle** -like elements (21A, 21B) which are each connected at one end thereof to one end of a **tape** (26) to be implanted into the body, are constructed to be connected one at the...

...said curved portion each element
being dimensioned to extend from the inside surface of the **vaginal** wall over the back of the pubic bone to the outside of the abdominal wall...

...portion (14) at said other end thereof to receive therein an end portion of the **needle** -like element (21A. 21B) at said one end of the element.
S. Instrument as in...
...c t e r i z e d in that the shank (10) and the **needle** -like elements (21A, 21B) have mutually co-operating means (20, 25) for positioning the respective...

...intended for use several times and consists of a material that can be autoclaved, the **needle** -like elements (21A, 21B) being intended for a single use and consist of plastics material...

...h a r a c t e r i z e d in that the **tape** (26) is attached to the associated element (21A. 21B) by the **tape** ends being glued or welded to the elements or being baked into the 15 plastics...

...h a r a c t e r i z e d in that the **tape** ends are passed through an eye (27) in the associated element (21A, 21B).

10 Instrument...

...h a r a c t e r i z e d in that the **needle** -like elements 20 are **curved** over substantially a quarter of a circle.
11 Instrument as in any of claims 1...

...a c t e r i z e d in that the elements (21A, 21B) **taper** towards the other, free end thereof.

12 Instrument as in claim 11
25 c h...

...h a r a c t e r i z e d in that the **tape** (26) is perforated for growth of fibroblasts thereinto.

15 Instrument as in claim 14
c h a r a c t e r i z e d in that the **tape** (26) comprises a

16 Instrument as in claims...

...h a r a c t e r i z e d in that the **tape** is coated with a fibroblast stimulating material.

17 Method for treating female urinary **incontinence** wherein a **tape** (26) is passed into the body and is implanted at each side of the urethra between the **vaginal** wall and the abdominal wall extending over the pubic bone, c h a r a c t e r i z e d in that the **tape** is passed, into the body via the **vagina** first at one end thereof and then at the other end thereof at one side and the other, respectively, of urethra to form a loop around the **vaginal** wall, and that the **tape** is tightended.

AMENDED CLAIMS
[received by the International Bureau on 9 January 1996 (09 96); original claim 17 amended; remaining claims unchanged (3 pages)]

1 **Surgical** instrument for **treating** female urinary **incontinence** , comprising a shank (10) having a handle (11) at one end thereof and a curved...

...end end thereof said portion being intended to be passed into the body via the **vagina** , c h a r a c t e r i z e d in that two **curved** **needle** -like elements (21A, 21B) which are each connected at one end thereof to one end of a **tape** (26) to be implanted into the to body,. are constructed to ...said curved portion each element being dimensioned to extend from the inside surface of the **vaginal** wall over the back of the pubic bone to the outside of the abdominal wall...

...portion (14) at said other end thereof to receive therein an end portion of the **needle** -like element (21A, 21B) at said one end of the element.

5 Instrument as in...

...c t e r i z e d in that the shank (10) and the **needle** -like elements (21A, 21B) have mutually co-operating means (20, 25) for positioning the respective...

...intended for use several times and consists of a material that can be autoclaved, the **needle** -like elements (21A. 21B) being intended for a single use and consist of plastics material...

...h a r a c t e r i z e d in that the **tape** (26) is attached to the associated element (21A. 21B) by the **tape** ends being glued or welded to the elements or being baked into the plastics material...

...h a r a c t e r i z e d in that the **tape** ends are passed through an eye (27) in the associated element (21A, 21B).

10 Instrument...

...h a r a c t e r i z e d in that the **needle** - like elements are **curved** over substantially a quarter of a circle.

11 Instrument as in any of claims 1...

...a c t e r i z e d in that the elements (21A. 21B) **taper** towards the other, free end thereof.

12 Instrument as in claim 11
c h a...

...h a r a c t e r i z e d in that the **tape** (26) is perforated for growth of fibroblasts thereinto.
66T
AMENDED SHE- (ARTICLE 19)
. Instrument as...

...h a r a c t e r i z e d in that the **tape** (26) comprises a woven **tape** .

16 Instrument as in claims 14 or 15
c h a r a c t e r i z e d in that the **tape** is coated with a fibroblast stimulating material.
17 (Amended). Method for treating female urinary **incontinence** wherein a **tape** (26) is passed into the body and is implanted at each side of the urethra between the io **vaginal** wall and the abdominal wall extending over the pubic bone, c h a r a c t e r i z e d in that the **tape** Js passed into the body via the **vagina** first at one end thereof and then at the other end thereof at one side and the other, respectively, of urethra to form a loop around urethra, and that the **tape** is tightened.
XvIENDED SHEET (ARTICLE 19)

40/3,K/226 (Item 226 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00319689 **Image available**
INSTRUMENT FOR GYNAECOLOGICAL SURGERY IN WOMEN
INSTRUMENT DE CHIRURGIE GYNECOLOGIQUE CHEZ LA FEMME
Patent Applicant/Assignee:
SADEK Latif,
Inventor(s):
SADEK Latif,
Patent and Priority Information (Country, Number, Date):
Patent: WO 9602197 A1 19960201
Application: WO 95NO126 19950711 (PCT/WO NO9500126)
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JP NO US AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
Publication Language: English
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Fulltext Availability:
Detailed Description
Claims

English Abstract
...together by a movable joint (4). One arm has in the end one or more **elongated** holes and when the **device** is closed the holes form an **extension** to the **tube**(s) on the other arm. The device can be opened by freeing teeth in the...

...shut and locked automatically in a position where the holes in one arm complete the **extension** of the **tubes** in the other arm. The **device** also comprises a thin **long** **needle** (s) which in use will be **guided** through the tube(s) in one of the arms, and a movable **needle** holder (10). The instrument has several uses e.g. **needle** suspension for **incontinence** or prolapse.

French Abstract
...mobile (10). Cet instrument a plusieurs applications, notamment comme support d'aiguille en cas d' **incontinence** ou de prolapsus.

Detailed Description
... for gynaecological surgery in women.

The invention relates to an instrument for use in the **surgical** **treatment** of gynaecological complaints.

The **surgical** **treatment** of **incontinence** and/or gynaecological prolapse in
women is both expensive and complicated.

Out-patient treatment of **incontinence** or gynaecological prolapse should fulfil the following criteria.

1. The surgical technique should be as...

...the operation under local anaesthetic.

This can only be achieved by use of a thin **needle** , avoiding contact with the
bladder or bladder neck (urethrea) from above during surgery and making only minimal incision in the abdominal wall.

There are several types of instrument for **surgical** **treatment** of **incontinence** (US 5 149 3299 US 5 013 292, US 5 112 344 and US 5 019 032).
Of these, US 5 112 344 concerns an instrument for correction of **incontinence** . This consists of a flexible **needle** plus a **needle** holder, while US 5 019 032 is a similar instrument which also has the facility for visually
monitoring the operation. US 5 013 292 consists of a **needle** , cannula and
sutures. US 5 149 329 consists of a pliable tube, a pliable suture **needle** with a cutting edge and a **needle** holder. The **needle** is pushed through the tube with the aid of the **needle** holder which has a fingergrip.

What is common to all these instruments is that they...

...in US 5 149 329 cannot be used with the present operating technique because the **needle** is too short and thick, and the thickness of the **needle** increases the risk of bleeding and it will be impossible to use local anaesthetic. The **needle** cannot be inserted blindly without a considerable risk of damage to the other organs in...

...abdomen. None of the instruments used in the prior art can therefore be used in **surgical** **treatment** in accordance with the four above mentioned criteria.
The object of the present invention is therefore to present an instrument which can be used for **surgical** **treatment** fulfilling the above criteria.

This object is achieved by the present invention characterized by the...

Claim
The instrument is used for **needle** suspension of the bladder neck for treatment of women suffering from **incontinence** . The instrument can also be used to perform a new and simple surgical technique for women with second degree of prolapsed uterus and utero- **vaginal** prolapse or for total **vaginal** (Vault's **vaginal**) prolapse following an earlier hysterectomy. The use of the instrument is, however, not limited to...

...the ring's outer edge 6. In addition the instrument contains one or more thin **needles** 8 which are sharp (cutting) in one end and blunt in the other and where...

...positioned, side by side lengthwise which are of suitable diameter for double surgical thread. The **needle** (s) will
in use be **guided** through a tube 5 and must therefore be made of slightly
pliable material. When the **needle** is in use the **needle** holder 10 should be

employed. This has a suitably sized hole through it and a screwclamp to retain the **needle** .
The invention is described in more detail with the help of the drawings where:
Fig. I shows a sideview of a closed device,
Fig. 2 shows the **needle** holder and the **needle** with the holes in the **blunt** end
enlarged,
Fig. 3 shows a sideview of the device with the movable connecting link...

...of the instrument is initiated by opening the device, and inserting arm 3 into the **vaginal** opening, guiding it with a finger placed in ring 6, so that the end(s...

...s) 5 on ring 6 is (are) placed against a small lateral cut in the **vagina** . The top end of arm 2 is placed in a small skin cut above the... arm 2 are now positioned over the end(s) of tube 5 in arm 3. **Needle** 8 is inserted into **needle** holder 10 and fastened with the **needle** holder screw, then inserted through tube 5 so that it
penetrates connective tissue and muscle...

...connecting link 4 so that the device opens and can be pulled out. This leaves **needle** 8 in the abdominal wall with the blunt end, with the holes protruding from the **vaginal** opening and the sharp end sticking up through the skincut
above the symphysis. The bladder is viewed from the inside by cystoscopy to ensure that **needle** 8 does not penetrate the bladder. If this should happen,
the **needle** 8 must be withdrawn, repositioned and checked again. The threads from one stitch or more which have been made in the **vaginal** wall
can now be inserted through the holes in **needle** 8 and pulled up through the abdominal wall with the help of the **needle** . Several holes in **needle** 8 make it possible to keep apart the thread ends which are being pulled out. The neck of the bladder or the **vaginal** wall or possibly the uterus, can now be lifted up by fastening the thread ends in a **band** in the abdominal wall. The
skin cut and the cut in the **vagina** should now be closed by sutures. Some
patients have the need for several fastening points...

...several tubes 5, all ending side by side which makes it possible to place several **needles** 8 at the same time while the device is in place. The design of the...be lying free on the outside of the arm. They must not
however, be more **curved** than that the **needle** 8 can be drawn through the
tube without difficulty. Fig. 2 shows the **needles** 8 which are sharp (cutting) at one end and blunt with two holes positioned side by side lengthwise at the other end. Other models may have several holes. The **needles** match the inner diameter of the tube 5 and may be made of a pliable material for example a steel alloy. A **needle** holder 10 with holes can be pulled on to the **needle** and fastened onto this with a screw clamp. Fig. 3 shows the device I with...

...avoids the risk of touching or damaging other organs.

2 During the passage of the **needle** , the **needle** meets the holes 7 in arm 2
and passes out without the need for further...

...and the patient against transmittable blood diseases.

3 The instrument has several areas of use;
Needle suspension for stress **incontinence** ;
Needle suspension for treatment of uterovaginal prolapse or Vault's **vaginal** prolapse which occasionally happen after removal of the uturus.
Operation adantages
1 An alternative for...

...in the two types of operation where the
recovery percentage is 94,1 for urine **incontinence** when examined after 14, 2 months and 90% for gynaecological prolapse examined after 12 months.
PATENT CLAIMS

1 **Surgical** device for use in gynaecological **operations** ,
characterized in that it comprises
(A) device (1) which consists of two curved arms (2...

...length of the arm, so that when the device is closed the holes form an **extension** to the **tube** (s) (5) on arm (3) which emerge(s) in the outer edge of the ring...

...it shuts and is locked automatically in a position where
the holes (7) complete the **extension** of the **tubes** (5);
1 5 (B) a thin, long **needle** (8) made of suitable material which has a sharp edge
in one end and one or more holes side by side in the **blunt** end, and
(C) a movable **needle** holder (10) pierced by a hole suited to the **needle** (8) where the **needle** (8) can be fastened by a screwing device when the **needle** holder is fitted onto the **needle** .

2 Surgical device according to claim 1,
characterized in that arm (2) has two oblong...

...NogS/00126. Surgical device according to one of the preceding claims, characterized in that the **needle** (8) is made of a stainless steel alloy.

40/3,K/235 **(Item 235 from file: 349)**
DIALOG(R)File 349:PCT FULLTEXT

00225882
INSTRUMENT PLACEMENT APPARATUS
APPAREIL DE MISE EN PLACE D'UN INSTRUMENT
Patent Applicant/Assignee:
AMERICAN MEDICAL SYSTEMS INC,
Inventor(s):
GIESY Jerry D,
HOSKINS Matthew W,
Patent and Priority Information (Country, Number, Date): = (US) 5152749
Patent: WO 9300126 A1 19930107
Application: WO 92US3111 19920423 (PCT/WO US9203111)
Priority Application: US 91886 19910628
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CA DE JP AT BE CH DE DK ES FR GB GR IT LU MC NL SE
Publication Language: English
Fulltext Word Count: 6064

Fulltext Availability:
Detailed Description
Claims

English Abstract
...for the placement of an instrument within a body cavity which comprises (i) a placement **device** including an **elongate** element (20) with an exposable tissue piercing tip (20b), a first coupler (46) adjacent to the tip, and a structure (22) for selectively exposing the tip; and (ii) an **elongate instrument** (40) for placement including a second coupler (44) adapted to be coupled to the first...

...instrument whereby said instrument is positioned within the body cavity. Preferably the instrument is a **suprapubic** instrument for placement within a bladder.

French Abstract
...40) pour la mise en place, qui comporte un deuxieme accouplement (44) concu pour s' **adapter** au premier (46) de maniere a realiser une liaison bout a bout du dispositif et...

Detailed Description
... within a body cavity. More particularly, the invention relates to an apparatus and device for **suprapubic** instrument placement.

Suprapubic catheters and instruments are used in any clinical settings including 1 0 cases involving female **incontinence** , trans-urethral resection of the prostate where continuous irrigation is used, neurogenic bladders, spinal cord injury and other cases where bladder drainage and/or healing are desired. Additionally **suprapubic** instruments are used for inspection and therapy of the bladder, prostate, and/or ureter.

Suprapubic catheterization offers a number of advantages over transurethral 1 5 catheterization. These advantages include increased...

...long-term catheterization, and improved evaluation of voiding and residual urine when applicable. Also, the **suprapubic** site is a convenient access route for instruments to observe and treat various conditions, the...

...urethra or concerns of urethral injury.
U.S. Patent No. 4,684,369 discloses a **needle** for introducing a **suprapubic** bladder drainage instrument through the urethra. The **needle** is adapted to be attached at its rear end to a catheter which follows the **needle** through the urethra.

Current methods of placing **suprapubic** catheters are 'outside-to-inside' method and the less common "inside-to-outside' method. With the outside-to-inside approach, a sharp **trocar** or catheter-obturator combination is used to pierce from outside the body through the lower...

...the catheter into the bladder where the catheter may be released and left in a **suprapubic** placement.

While complications are rare, difficulties have been reported with percutaneous 35 outside-to-inside **suprapubic** catheterization using a **troc**ar . For example, the catheter may be placed accidentally outside of the bladder. The standard method of using a **trocar** /catheter arrangement does not always provide the accuracy and control needed for correct placement of...

...of injury to the floor of the bladder or damage to the bowel. Uncertainties in **trocar** alignment, orientation, or insertion distance can lead to such injuries. Thus, poor alignment or variable...

...limited choice of catheter sizes and types, inadequate catheter lumen size may result.

Finally, inappropriate **suprapubic** puncture size may result in extravasation of urine around the catheter or into the retroperitoneum... through the urethra and its tip pushed against the bladder dome and anterior abdominal wall. **Suprapubic** palpation enables the practitioner to select a desired penetration site. The curved tool is pressed...

...device is coupled to the drainage tube in some fashion so that the tube is **guided** into the bladder. Once within the bladder, the drainage tube is released. The device is...

...and bladder wall.

The present invention provides improvement in the art of inside-to-outside **suprapubic** instrument placement.

Improvements in the **suprapubic** instrument placement may be applied to other medical applications. For example, in substantially non-invasive **methods** of internal **operations** , e.g. laproscopic **surgery** , the practitioner accesses internal organs through small **incisions** and working sheaths. The **instruments** used in such operations are generally elongate and adapted for use by way of these small incisions or sheaths.

Accordingly, improvements in placement of **suprapubic** **instruments** ,

which are generally **elongate instruments** , may be applied to such substantially non-invasive operations.

In accordance with the present invention...

...for the placement of an instrument within a body cavity which comprises (i) a placement **device** including an **elongate** element with an exposable tissue piercing tip, a first coupling means carded by said elongate...

...located adjacent to said tip, and means for selectively exposing said tip; and (11) an **elongate** portion of said **instrument** for placement including a second coupling means adapted to be coupled to said first coupling...

...being adapted to be mutually engaged to effect an end to end coupling of said **device** at said **elongate** element and said **instrument** at said **elongate** portion whereby said **instrument** is positioned relative to said body cavity by movement of the placement device as coupled... movement therebetween.

A particularly preferred embodiment is one in which the elongate element is a **needle** and the tissue piercing tip is the tip of said **needle** , said first coupling means is positioned adjacent the **needle** tip, and said **locking** means comprises a **sheath** slidable on said **needle** , whereby said sheath may be advanced over said **needle** tip and said first coupling means to selectively shield said tip and to lockingly envelop...

...instrument has a proximal end with instrument coupling means attached thereto, which device comprises.

a **needle** having a proximal end and a distal end with a tip adapted to pierce
body tissue;
a sheath adapted to slidably accommodate said **needle** , one of said **needle** and said sheath being substantially rigid and the other of said **needle** and said sheath being flexible and adapted to conform in shape with the substantially rigid **needle** or sheath, one of said **needle** and said sheath having device coupling means adapted to lockingly couple with said instrument coupling means in cooperation with relative sliding movement of said sheath and said **needle** ; and
handle means located at the proximal end of said **needle** and operatively coupled to said **needle** and said sheath to enable the **needle** and sheath to be moved relative to each other to selectively expose the tip of the **needle** beyond said sheath.

1 0 Preferably the device coupling means is an indentation adapted to...

...the form of a loop. In a particularly preferred embodiment the indentation is adjacent said **needle** tip and the engagement of the loop with the indentation is adapted to be **lockingly** enveloped with the **sheath** when said sheath is advanced over said **needle** tip. It is also preferred that the **needle** is 1 5 substantially rigid and the sheath is flexible.

In an alternative embodiment the...

...ball and stem and the engagement of the two coupling means is adapted to be **lockingly** enveloped within the **sheath** when the sheath is advanced over the **needle** tip.
Preferably the instrument to be placed by the device is adapted for **suprapubic** placement and said substantially rigid one of said **needle** and said sheath is adapted in shape for insertion within a selected urethra.

When the...The invention further provides a coupling mechanism for coupling in end to end relationship an **elongate instrument** to an **elongate** placement **device** whereby said **instrument** may be placed within a body cavity by movement of the placement device,
which coupling mechanism comprises;
instrument coupling means attached to a proximal end of said **elongate instrument** and **device** coupling means carried by said placement device and located adjacent a distal end of said...

...instrument to said device so that the coupling is sufficiently secure 1 0 against relative **longitudinal** movement between said **instrument** and said device in
order to place said instrument; and
locking means for selectively resisting...

...in the accompanying drawings, in which.
FIG. 1 is an exploded perspective view of a **suprapubic** instrument placement device in accordance with the present invention.

FIG. 2 illustrates a **suprapubic** instrument placement device similar to that of FIG. 1 , but with an alternative handle shape and **assembled** to illustrate its coupling relationship to a catheter having a mating coupling means thereon.

...placement device and the instrument to be drawn into the bladder.

FIGS. 5A-5F illustrate **suprapubic** instrument placement using a placement
1 0 device according to the invention.

FIG. 6 illustrates an alternative coupling means in accordance with the present invention.

FIG. 7 is a **needle** and sheath arrangement adapted for placement within the male urethral sound.

Instrument placement using a preferred embodiment of the present invention as applied to **suprapubic** instrument placement uses a placement device comprising a **needle** similar in shape to that of the urethral sound, slidably disposed within a sheath sized to suitably dilate the puncture made by the **needle** . The distal tip of the **needle** coupling means adjacent thereto is configured such that it accepts and couples with a mating...

...to be pulled into the bladder. The preferred structure of the coupling means on the **needle** and the instrument to be pulled into the bladder is such that the instruments cannot...

...axis, yet may be disengaged in response to lateral forces. To more fully

secure the **needle** and instrument while drawing the instrument into the bladder, the sheath is advanced over the tip of the **needle** to prevent the instrument coupling means from releasing from the **needle** tip coupling means.

The preferred embodiment illustrated in FIG. 1 of the drawings comprises a **suprapubic** instrument placement device 10 which includes a handle 12 with a central slot 14 therein...

...end 12b of the handle to the distal end 14b of the slot. A rigid **needle** 20 is accommodated within aperture 18 and couples at its proximal end 20a to the hub 16 at the proximal end 14a of slot 14. In the illustrated embodiment **needle** 20 is substantially **straight** but includes a bend 20c to provide a distal end portion which makes an angle of approximately 15 degrees with the main portion of the **needle** whereby **needle** 20 conforms generally in shape to that of a urethral sound.

A flexible sheath 22 slidably mounts upon **needle** 20 and conforms to the shape of **needle** 20. A proximal end 22a of sheath 22 threadably connects to a thumb piece 24...

...sheath 22 and thumb piece 24 for sealably coupling sheath 22, thumb piece 24, and **needle** 20. Thumb piece 24 is slidably positionable within the slot 14 with a 1 0 smaller diameter portion of aperture 25 (not shown) closely receiving **needle** 20 for slidable mounting thereon. The ...mentioned lesser diameter portion closest to proximal slot end 14a adapted for slidably receiving the **needle** 20.

1 5 A spring 26 mounts coaxially upon the **needle** 20 near its proximal end 20a and is located between the thumb piece 24 and...

...slot end 14a to bias thumb piece 24 toward the distal slot end 14b. The **needle** 20 is rigidly affixed to the handle 12 at hub 16. Thumb piece 24 is slidably positioned upon the portion of the **needle** 20 residing within slot 14. Also, spring 26 biases thumb piece 24 toward the distal end 14b of slot 14. The 0 ring 23 slides down the length of **needle** 20 and into slot 14 for positioning within the aperture 25 of thumb piece 24. Sheath 22 is then positioned upon **needle** 20 by inserting the distal end 20b of **needle** 20 through the proximal end 22a of sheath 22 whereby the proximal end 22a of...

...suitable sheath diameter may be selected
corresponding to the diameter of the instrument to be **suprapubicly** placed. In this manner, sheath 22 performs a dilating function to closely match the diameter...

...between the bladder and the abdominal wall with the diameter of the instrument to be **suprapubicly** placed.

The proper relative length of **needle** 20 and sheath 22 as compared to the
length of slot 14, i.e., range...

...the user of the device 1 0 to selectively expose the distal end 20b of **needle** 20 beyond the distal end 22b of sheath 22 by operation of thumb piece 24 within slot 14.

FIG. 2 illustrates a **suprapubic** instrument placement device 1 0 in its **assembled** configuration, but having a T shaped handle 12'. In other respects, the devices 10 of...

...12' provides the practitioner with a reference for orientation of the distal end 20b of **needle** 20. A practitioner familiar with the shape and orientation of handle 12 relative to the orientation of **needle** 20 more accurately positions the distal end 20b of **needle** 20 during **suprapubic** instrument placement. In operation, **needle** 20 remains fixed relative 1 0 to handle 12', but sheath 22 moves relative to of **needle** 20 as indicated by arrows 32. In this manner, the distal end 20b of **needle** 20 may be selectively exposed at the distal end 22b of sheath 22.

1 5...

...for attachment to an indentation or notch 46 adjacent to the distal end 20b of **needle** 20.

FIG. 3 is a detailed view of the end 40b of catheter 40 and distal end 20b of **needle** 20. FIG. 3 illustrates the coupling of the loop 44 and indentation 46. As shown in FIG. 3, the distal end 20b of the **needle** 20 extends, by operation of thumb piece 24, beyond the distal end 22b of sheath...

...expose the indentation 46. Indentation 46 receives the loop 44 of catheter 40 for coupling **needle** 20 and catheter 40. With reference to FIG. 4, once the loop 44 is positioned...

...advanced by movement of thumb piece 24 (FIG. 2), beyond the distal end 20b of **needle** 20. In such configuration, the loop 44 is drawn into **sheath** 22 and **lockingly** engaged with indentation 46.

FIGS. 5A-5F illustrate **suprapubic** instrument placement by use of the device 1 0 and catheter 40. In FIG. 5A...

...distal end 14b of slot 14 whereby sheath 22 shrouds the distal end 20b of **needle** 20. In FIG. 5B, device 10 is lifted against the dome 62a of bladder 62...

...the peritoneum 68.
Once the position of device 1 0 is verified as suitable for **suprapubic** instrument placement, the thumb piece 24 is drawn back to expose the distal end 20b of **needle** 20. The point of **needle** 20, i.e., the distal end 20b, may then be pushed, substantially longitudinally, through the...

...the abdominal 0 wall 70 as shown in FIG. 5C. In certain cases, a small **suprapubic** incision may be made to assist advancement of the device 1 0 through the anterior...of thumb piece 24 then moves sheath 22 back over the distal end 20b of **needle** 20 to fully secure the catheter 40 and device 1 0. Referring now to FIG...

...the bladder is enhanced as traction can be applied at either end of the device **assembly** until the correct location is determined and the catheter released.

Turning to FIG. 5E, once...

...bladder 62, thumb piece 24 is again actuated to expose the distal end 20b of **needle** 20. Lateral forces applied to the device 1 0 relative to the catheter 40 release...

...of catheter 40. Once so configured within the bladder 62, catheter 40 is operational.

Thus, **suprapubic** instrument placement using an apparatus according to the present invention avoids many potential hazards of **suprapubic** instrument placement.

For example, before penetrating the bladderwall or abdominal wall, the practitioner may accurately...

...of these devices, but because the sheath 22 may be positioned over the tip of **needle** 20, the loop 44 is securely held within the indentation 46. Once the catheter 40 is positioned within the bladder 62, exposing the **needle** tip 1 0 and therefore the loop 44 and indentation 46 allows the practitioner to...a stem 81. A cavity 82 and groove 83 adjacent the distal end 20b of **needle** 20 receive the ball 80 and stem 81, respectively. To secure the catheter 40 of...

...groove 83. The sheath 22 may then be moved over the distal end 20b of **needle** 20 to fully secure the ball 80 within the cavity 82. The arrangement of FIG...

...the device 10, many forms of catheter and other instruments, e.g. obturators, suitable for **suprapubic** instrument placement may be used in accordance with the present invention. For example, the types of **suprapubic** catheters applicable to the present invention include Foleys, Maleoots, pigtails and loop-types. The ability...

...accidental perforation and catheter misplacement.

In the illustrated embodiments of FIGS. 1-5, the sheath- **needle assembly**
comprises a 25 cm length, 13 gauge **needle** , which is shaped for a female urethra.

FIG. 7 illustrates a configuration more suitable for the male urethra. In FIG. 7, **needle** 20 is shown extended approximately one inch beyond the distal end 22b of sheath 22.

As previously described, the **needle** 20 is desirably a substantially rigid element while the sheath 22 is a flexible member adapted to conform in shape to that of **needle** 20 1 0 while being slidably disposed thereon. In this regard, rigidity in **needle** 20 may be achieved by use of a stepped-gauge or **tapered** -gauge **needle** . A central length portion 20c of **needle** 20 is approximately 2.5 inches, or 6.35 centimetres. The proximal length portion 20d of **needle** 20 is approximately three inches , or 7.62 centimetres, and aligned at approximately 20 degrees relative to length portion 20c. A distal length 1 5 portion 20e of **needle** 20 is **curved** along a radius of approximately 2.625 inches, or 6.67 centimetres, extending from the central length portion 20c to the straight distal length portion 20f. The **curvatures** provided in the **needle** 20 maintain each length portion of **needle** 20 within a common plane, with the curvature of portion 20d relative to portion 20cin

opposite half-planes as defined by portion 20c. The configuration of **needle** 20 and sheath 22 as illustrated in FIG. 7 conforms to male anatomy while permitting proper angulation to select **suprapubic** placement and provide good transfer of longitudinal energy forces.

Suprapubic procedures, as made more available and practical by the present invention, offer many advantages. **Suprapubic** catheters provide increased patient comfort and minimization of infection in comparison to urethral catheters. Transurethral resection of prostate (TURP) irrigation via a **suprapubic** tube has been found to maximize visibility and speed resection time. Reduced morbidity and hospital...

...when percutaneous bladder procedures are used over open operations. Improving the ease and safety of **suprapubic** catheter and instrument placement encourages their broader use and allows their benefits to be more fully realized.

Inside-to-outside **suprapubic** instrument placement further provides full control over catheter placement; accurate **suprapubic** puncture location and orientation protection of penetrating element (**needle**); compatibility with a variety of catheter sizes and types; and coordination of puncture diameter With catheter size. Other benefits of **suprapubic** : instrument placement include the capability to fill or drain the bladder, via the **needle** . It is also possible to inject a local anesthetic through the **needle** , offering the potential for bedside placement of **suprapubic** catheters.

Limitations in the application of the apparatus of the present invention are few.

For example, in **suprapubic** instrument placement, urethral obstruction would not permit inside-to-outside access to the bladder. Obesity...

...0 location is enhanced as traction can be applied at either end of the device **assembly** until the correct location is determined and the catheter is released. The apparatus in accordance...

...in various surgical fields, a less demanding, and more reliable option for the performance of **suprapubic** instrument placement.

In addition to the specific embodiments described and illustrated herein, other embodiments are...

...the invention. For example, a rigid sheath may be employed in combination Wth a flexible **needle** , or even two rigid components if applicable, wherein the shape of the sheath corresponds to...

...may be located on the sheath as an alternative to a coupling means on the **needle** . Transfer tubes, catheters, stents, wire **guides** , scopes, and other instruments to permit diagnosis and operation may be modified for ...placed, e.g., for cardiovascular, gastroenterologylaparoscopyandothersituationswhereindirectmeansareemployed.

Finally, the reliability and control of inside-to-outside **suprapubic** instrument placement as provided by the apparatus of the present invention Will likely generate increased use of **suprapubic** devices and,

therefore, further advance the art of urologic treatment.
a
I
A

Claim
... of an instrument within a body
cavity characterized in that it comprises (i) a placement **device** including an **elongate** element 20 with an exposable tissue piercing tip 20b, a first coupling means 46 carried...

...adjacent to said tip, and means 22 for selectively exposing said tip; and (Ii) an **elongate** portion of said **instrument** 40 for placement including a second coupling means 44 adapted to be coupled to said...

...being adapted to be mutually engaged to effect an end to end coupling of said **device** at said **elongate** element and said **instrument** at said **elongate** portion whereby said **instrument** is positioned relative to said body cavity by movement of the placement device as coupled...

...An apparatus according to Claim 1 characterized in that the elongate element 20 is a **needle** and said tissue piercing tip 20b is the tip of said **needle** , and one of said first coupling means 46 and said second coupling means 44 includes **locking** means comprising a **sheath** 22 slidable on said **needle**0?, whereby said sheath may be advanced over said **needle** tip 20b and said first coupling means 46 to selectively shield said tip and to...

...proximal end with instrument coupling means attached
thereto, characterized in that the device comprises:
a **needle** 20 having a proximal end 20a and a distal end with a tip 20b adapted
to pierce body tissue;
a sheath 22 adapted to slidably accommodate said **needle** , one of said **needle** and said sheath being substantially rigid and the other of said **needle** and said sheath being flexible and adapted to conform in shape with the substantially rigid **needle** or 30 sheath, one of said **needle** and said sheath having device coupling means 46 adapted to lockingly couple with said instrument coupling means 44 in cooperation with relative
sliding movement of said sheath and said **needle** ; and
-1
handle means 12 located at the proximal end of said **needle** and operatively coupled to said **needle** and said sheath to enable the **needle** and sheath to be moved relative to each other to selectively expose the tip of the **needle** beyond said sheath.

4 A device according to Claim 3, characterized in that the device...

...instrument coupling means in the form of a loop 44, the indentation being adjacent the **needle** tip and the engagement of the loop with the indentation being adapted to be **lockingly** enveloped within the **sheath** 22 when the sheath is advanced over said **needle** tip 20b.

5 A device according to Claim 3, characterized in that the instrument 1...

...ball and stem and the engagement of said two coupling means is adapted to be **lockingly** enveloped within the **sheath** 22 when said sheath is advanced over said **needle** tip. 1 5 6. A device according to Claim 3, characterized in that the instrument is adapted for **suprapubic** placement and said substantially rigid one of said **needle** and said sheath is adapted in shape for insertion within a selected urethra.

7 A -coupling mechanism for coupling in end to end relationship an **elongate instrument** to an **elongate** placement **device** whereby said **instrument** may be placed within a body cavity by movement of the placement device, characterized in...

...said coupling mechanism comprises:
instrument coupling means 44 attached to a proximal end of said **elongate**

instrument 40 and **device** coupling means 46 carried by the placement device and located adjacent a distal end of...

...relationship said instrument to said device so that the coupling is sufficiently secure against relative **longitudinal** movement between said **instrument** and said device in
order to place said instrument; and
locking means 22 for selectively...

...A coupling mechanism according to any one claims 7 to 9, characterized in that the **locking** means comprises a **sheath** 29 slidably disposed upon one of said 1 5 instrument and said device and adapted...

40/3,K/238 (Item 238 from file: 349)
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SUSPENSION PROCEDURE FOR TREATING FEMALE STRESS INCONTINENCE
PROCEDE DE FIXATION UTILISE POUR LE TRAITEMENT DE L' INCONTINENCE **FEMININE A L'EFFORT**
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Inventor(s):
ROBERTSON Jack R,
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PROCEDE DE FIXATION UTILISE POUR LE TRAITEMENT DE L' INCONTINENCE **FEMININE A L'EFFORT**
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Detailed Description
Claims

English Abstract
...to Gittes and Lughlin is improved by simultaneous gas obturation and visual monitoring using a **suprapubic** endoscope, inserted with the aid of a urethral **trocar** (11). It is further improved by simultaneous manipulation of the urethra (22), bladder (23) and other tissues by the **trocar** , to optimize alignment for the Gittes procedures. The **trocar** , and procedure for its use, are refinements of the present inventor's earlier apparatuses and procedures for **suprapubic** cystostomy with endoscopy, and for gas obturation.

French Abstract
...surveillance visuelle a l'aide d'un endoscope sus-pubien, introduit au moyen d'un **trocart** uretral (11). Elle peut etre davantage amelioree par la manipulation simultanee de l'uretre (22), de la vessie (23) et d'autres tissus au moyen du **trocart** , afin d'effectuer de maniere optimale l'alignement pour les procedes de Gittes. Le **trocart** et le procede d'utilisation representent des perfectionnements des appareils et procedes anterieurs concus par...

Detailed Description
... and apparatus; and more particularly to refinement of such procedures and apparatus for treating stress **incontinence** in women by pubovaginal **suspension** without **surgery** .

2, PRIOR ART

17 Ruben F. Gittes and Kevin R, Loughlin have introduced "a modified **needle** suspension for urinary **incontinence** that eliminates all incisions." 138 The Journal of Urology 568-70 (1987). In their method, as described in an abstract.

23 "The anterior **vaginal** wall is suspended from the rectus fascia with 2 heavy nonabsorbable monofilament mattress sutures. The sutures pass down through and back up through the full thickness of the **vaginal** wall, and are tied **suprapubically** to bury the knot into the fat in the **suprapubic** puncture site. . * . [M]onofilament mattress sutures that are tied under tension to include the outside...

...was modified to include an extra full thickness pass of the mattress suture through the **vaginal** wall, There have been no significant complications."

12 Without detracting in the least from these...

...approaching the clairvoyant, on the part of the physician.

19 "A special long mattress-type **needle** is needed.

A small puncture is made e . into the **suprapubic** fat pad. . * . The long **needle** is popped through the rectus fascia and the anteriorly deflected tip is advanced carefully down...

...of the pubic bone. At the same time, the operatorts second hand elevates the anterior **vaginal** wall lateral to the Foley balloon, thus, just lateral to the bladder neck. Wiggling the **needle** from above and directing it toward the fingertip by rocking forward the **suprapubic** portion of the **needle** shaft avoids a false passage into the bladder or past the lateral **vaginal** wall. While controlling the tip of the **needle** with the tip of the finger, the operator examines the tented@up

vaginal wall to make sure it is not too medial or lateral, and then the tip out damage to the bladder wall by the sutures and to place a percutaneous **suprapubic** [cystostomy] under endoscopic control. The 70-degree telescope allows for close inspection of the bladder...

...coursing submucosally, that arm of the suture is identified by traction, pulled out into the **vagina** and replaced upward with a new pass of the mattress **needle** . In difficult cases, as in bladders widely fixed anteriorly by the Burch modification of the

Marshall-Marchetti operation, the passage of the **needle** can be monitored continuously endos copically with the 120-degree telescope."
23 Although Gittes and Loughlin go on to recommend using a **suprapubic** "puncture" later for placement of a 11suprapubic tube of the **trocar** variety" @- for postprocedure drainage @- they clearly do n2t use that **puncture** for placement of a viewing **device** for the monitoring step.

From their discussion it is evident that they instead insert an endoscope through the urethra. Their **suprapubic** drain is installed in a puncture made from the outside while watching the anterior bladder...

...That procedure is only a s1light improvement on the conventional method, which employs a large **trocar** inserted **suprapubically** from above,, blind @@ that is,, puncturing the abdominal wall and bladder from the exterior, without...

...cation by J* T. Mason and R. M. Soderstrom, 6 Urology 233 (1975) provided for **suprapubic** monitoring of **needle** placement, by means of a rigid cystoscope inserted through a Foley catheter that had been...
...o-, whether it be a 70o-degree or 120-degree instrument -,wo to monitor the **needle** passage has important drawbacks, as follows.

The area of greatest concern with respect to inadvertent...

...that the neck is the portion to be elevated, and is immediately adjacent to the **vaginal** wall ow,,o- the target of the **needles** . In other words, it is in this region that the **needles** must be brought closest; but this is precisely the spot at which the '...neck,, without actively making matters worse by inadvertently pushing the neck itself toward the advancing **needle** tip, In many cases these two constraints seem to be mutually inconsistent, Yet Gittes and...

...cystoscope, thereby facilitating continuous observation of the bladder wall and neck during passage of the **needles** . Still, neither Mason and Soderstrom nor Loughlin has offered anything to mitigate the hazards of introducing the viewing **device** by a blind **puncture** .

is
In another area of prior practice, the present inventor some twenty years ago introduced certain procedures and instrumentation for introducing **suprapubic** catheters without the potentially lethal use of a large **trocar** in blind insertion. See United States Patents 3,640,281 and 3,656,486 (both filed 1970); and " **Suprapubic** Cystostomy with Endoscopy" 41

Obstetrics@Gynecology 624-27 (1973)o
The system there described is...

...prevalent use
today, and Gittes and Loughlin make no reference to it,
It provides a **trocar** that is inserted through the
urethra, into the bladder, and against the bladder lining
and...

...puncture. The puncture itself is preferably made from
the exterior, against the tip of the **trocar** that is
within.
The **trocar** is then preferably passed through that
puncture outward, from within the bladder, and attached
outside the body to a catheter or other instrument*
Alternatively the **trocar** need not be actually passed out
from the abdomen but can be attached to the catheter or
other **instrument** while lying just within the **puncture** .

The **trocar** motion is then reversed to draw the
trocar and external **instrument** through the **puncture** and
into the bladder, Thereupon the **trocar** can be forthwith
disconnected and withdrawn from the urethra, or can be
temporarily kept in...

...purposes such as
inflation of the bladder.

To facilitate connection and later disconnection of
the **trocar** and the catheter or other instrument, the
trocar was fashioned with either a hook, in a lateral
recess near its end, or an...not
mentioned by Gittes and Loughlin @@ or even in Loughlin&*s
most recent paper reintroducing **suprapubic** viewing.
31 SUMMARY OF THE DISCLOSURE
33 Before formally summarizing my present invention, I
shall...

...technique is to monitor
placement by an instrument (such as the Mason and Soder
strom **suprapubic** cystoscope) that is independent of the
critical region. In the latter technique, the manipula
tions...

...interfere with the
position of the bladder neck. To put it in another way,
the **suprapubic** viewing technique is at least passive with
respect to positioning of the bladder neck: the...

...below -
the practitioner can readily draw the neck of the bladder
away from the advancing **needle** tip, thereby minimizing
the chance of inadvertent puncture. Further, my
procedure for the first time combines in the **suprapubic**
suspension method @@ without compromising any desirable
features of that technique @- steps to prevent the hazard...
...offer a more formal definition of my present invention.

It is a procedure for treating **incontinence** in a woman, comprising the steps of.

37 (1) inserting a urethral **trocar** into the woman's bladder and therethrough to press outward firmly against the woman's...

...from
the exterior of the woman's body;
4 (2) then, with the exteriorly perceptible **trocar** as a **guide** , making a **suprapubic** incision in the woman's abdominal wall and bladder to gain access to a tip of the **trocar** ;
9 (3) then using the tip of the **trocar** directly or indirectly to **guide** a tip of a viewing **device** through the **suprapubic** **incision** and into the woman's bladder; and
14 (4) then installing sutures between the woman's rectus fascia and **vagina** , by means of a **needle** inserted through the woman's abdomen and into the woman's **vagina** ;
19 (5) substantially during the suture-installing step, monitoring the interior of the bladder through the viewing **device** to avoid placement of **sutures** in the bladder wall -@ so that the viewing device is remote from the neck of...

...particularly likely; and
26 (6) substantially during the suture-installing and monitoring steps, maneuvering the **trocar** or the viewing device, or both, to manipulate tissues of the woman's bladder,, urethra...

...as thus described the critical
bladder-urethra junction region is actively maninulated away from the **needles** . Furthermore, a clear view of that
I
region is provided, the hazards of a blind puncture in installing a **suprapubic** drain and viewing device are essentially prevented, and each of these advantages is obtained without...
...the step numbered 11311
above) comprises the substeps of: (a) employing the tip of the **trocar** directly or indirectly to **guide** an end of a catheter through the **suprapubic** incision into the woman's bladder; and (b) then inserting the tip of the viewing...

...guiding the
end of the balloon, together with the end of the catheter, through the **suprapubic** incision into the soman's bladder, and then inflating the balloon to anchor the end...

...tip of the viewing device or of an intermediary appliance with the tip of the **trocar** ; and (b) then moving the tip of the viewing device or appliance, while it is

mated with the tip of the **trocar** , inward through the incision and into the woman's bladder.

- 10

In a third preferred embodiment of my invention, the **trocar** -tip-using step (as before, step 11311 above) comprises: (a) passing the **trocar** tip outward through the **suprapubic** incision; (b) then mating the tip of an viewing device or of an intermediary appliance with the tip of the **trocar** ; and (c) then moving the tip of the viewing device or appliance, together with the tip of the **trocar** , inward through the incision and into the woman's bladder,

By comparison of the first three preferred embodiments, which have been introduced above, it will be appreciated that the **trocar** tip need not be actually passed outward through the incision, out of the patient's...

...embodiment mentioned above) or in mating the tip of the viewer or appliance with the **trocar** tip and moving the tips together into the bladder (as in the second preferred embodiment...

...the first and second embodiments may be performed, if preferred, with the tip of the **trocar** remaining just within the incision.

A fourth preferred embodiment includes another step, performed before the inserting step @@ namely, making or obtaining a urethral **trocar** that bears visible graduations along at least part of its length. In this fourth preferred embodiment, the **trocar** @maneuvering step comprises referring to the graduations as they appear at the woman's perineum...

...embodiment includes another step, performed before the inserting step -- namely, making or obtaining a urethral **trocar** with a recess at its tip and a generally peripheral ridge around the recess. In...

...comparison of the fourth and seventh embodiments discussed above, it will be appreciated that the **trocar** may be formed to define both the recess and the graduations, and both features can...both with and without the "maneuvering" step.

More specifically, Figs. 1 and 2 show the **trocar** @inserting step numbered "111 in the preceding section of this document;

Figo 3 shows the...

...112" in the preceding section;

Figs. 4 through 6 show a preferred form of the **trocar** @tip@using step numbered "311 in the preceding section;

Figs* 7 and 8 show the...

...line 7a-7a in Fig. 7) and the entire embedded
lengths of the suture-installing **needles** ,
Fig. Sa in a similar very schematic and composite
way shows the same stage of...

...not sectional views, but
rather represent primarily actual viewable'scenes as
observed using a viewing **device** inserted through the
suprapubic incision . Figs. 10a and 12a show the
monitoring step 11511 at the same stages as Figs...

...an external elevati@n, partly broken away
to show a fragmentary cross-section, of a **trocar**
particularly suited for use in practice of the procedure.
- 13
DETAILED DESCRIPTION
OF THE PREFERRED EMBODIMENTS
4 In Fig. 1 a **trocar** 11 is shown inserted into a
patient's body 21. In the drawing, part of the shaft 12
of the **trocar** 11 lies within the patient's urethra 22,
extending into the bladder 23 through the bladder neck or
urethra-bladder junction 24.

The **trocar** includes a **curved** shaft portion 13, which
lies entirely or mostly within the bladder; and a shaped
tip 14, which is within the bladder. Defined along the
trocar shaft are indicia, or graduations 15, to aid the
operator in determining relative distances of ...the suspension
procedure is inten@
ded to mitigate the inconveniences, embarrassments and
discomfort of urinary **incontinence** that results from
degeneration and sagging of the lower body@cavity wall.

These conditions include...

...is intended to suggest these
conditions. Also appearing in the drawing are the
patient's **vagina** 25, perineum 26, peritoneum 27, external
abdominal surface 28, and right leg 29.

Also well known is the general strategy of the
suspension technique @@ namely, to employ the patient's
vagina 25 essentially as a **sling** to lift the urethra
upward and slightly forward (ventrally) , toward the
suprapubic portion of the abdomen. (Readers unfamiliar
with this arrangement may refer aheqd to Figs. 8...

...it, and thereby to
reposition and redefine the bladder neck 24.

In Fig. 2 the **trocar** tip is advanced further
- 14
first against the bladder wall, and then yet further to...

...distinct bulge 32
in the abdominal surface 28. Figs. 1 and 2 thus

represent the **trocar** @insertion step (1) mentioned in an earlier section of this document.
In Figs. 2 and...

...and carefully positioned so
that a sharp tip 42 of the scalpel will meet the **trocar** tip 14. Then the operator pushes the scalpel tip 42 through the abdominal wall 28, peritoneum 27, and bladder wall 23, to engage the **trocar** tip 14,
Fig* 3 thus represents the incision-making step (2) stated earlier. As will be seen, to facilitate this step I prefer to form the **trocar** tip as a shallow recess or cup that positively receives the scalpel tip 42a
Fig* 4 shows that the **trocar** tip 14 can then be pushed outward through the incision just made, to protrude at...

...its shaft 44 generally vertical
above the abdomen and its tip 45 aligned with the **trocar** tip 14e
The catheter 43 is preferably of a type that includes an annular balloon...

...44) for the balloon
46*
The operator firmly engages the catheter tip 45 with the **trocar** tip 14, ...the sense
of making the image more readily visible to the person actually manipulating the **trocar** , etc. @- as well as other medical personnel who may be involved.

Nevertheless the procedure can...

...relatively delicate and
sensitive instruments, better not forced through a just@established incision. Moreover, a **suprapubic** drain catheter is highly desirable anyway, in or after the final stages of the procedure...

...the movements
shown may be considered as merely -- in the words of the previously defined **trocar** -using step (3) -- "using the tip of the **trocar** . * . indirectly to **guide** a tip of the viewing **device** through the **suprapubic** **incision** and into the woman's bladder".
Figs. 4 through 6 thus represent that **trocar** @using step (3). It may now be appreciated why the term "indirectly" is included in the statement of that step.

As mentioned earlier, the **trocar** need not
necessarily actually protrude fom the incision as shown in Fig. 4* If preferred, the catheter tip etc. may instead be mated with the **trocar** tip while the latter remains just within the incision, and then the two tips moved...of some embodiments of my present invention.

As described in my earlier patents on the

suprapubic - incision procedure and **instrument** , using the **trocar** in the present procedure is very advantageous to identify the proper spot for the incision...

...other
anomalously placed anatomical feature. In the present procedure, however, the coordinated use of the **trocar** and catheter etc. provide an important additional advantage.

protecting against overinsertion of the catheter and...
...strongly
against overinsertion of the viewing device.

Insertion@distance graduations 15 (Fige 1) on the **trocar** or catheter, or both,, enhance this added advantage of the **trocar** system for forming the incision and installing the catheter and viewer.

The graduations, preferably with...

...of the "maneuvering"
step (6). These illustrations abbreviate the process in that they show two **needles** 51, 53 in use at once, In actual practice, first a **needle** 51 would be used to install one suture just to the left of the urethra...

...clear of the bladder and bladder neck, then the bladder would be emptied, next a **needle** 53 would be used to install another suture just to the right of the urethra...

...be seen, the left@hand suture 55, firmly secured at its terminus 56 to the **vaginal** wall near its left extremum 34, actually moves upward (that is, in the direction of...

...bladder neck 24.

Similarly the right@hand suture 57,,secured at its terminus to the **vaginal** wall near its right extremum 35,, moves upward and ventrally around the right side of the urethra 22 and bladder neck 24.

The **vagina** thus forms a suspension **sling** that lifts and extends the urethra 22 and neck portion 24 upward and
- 18
ventrally...

...is full it is larger and therefore much more difficult to avoid when passing the **needles** .

In conventional current practice the bladder is filled with water, although I consider that practice...

...contamination of the
peritoneal cavity.

Figs. 7, 7a, 8 and 8a illustrate how closely the

needles 51, 53 and sutures 55, 57 pass to the urethra 22 and bladder 23, and...

...unusual
instances the urethra.

In particular, Figs. 7 and 7a show that the left-side **needle** tip 52 passes @@ at generally the position marked 511 @@ immediately adjacent to the left side of the bladder neck 24. Any slight deviation of either the **needle** or the bladder neck can readily produce an intersection of the two. t
Similarly, Fig. 7a shows that the right~side **needle** tip 54 passes @@ at generally the position marked 531 immediately adjacent to the right side of the bladder neck 24. The **vagina** 25 is typically only slightly wider than, and not far behind, the bladder neck; and...

...by irregular or disorga@
nized sagging, drooping and folding. In a typical case, therefore, the **needle** 51 or 53 on at least one side or the other is rather likely to shown in Figs. 9 and 9a, the **trocar** 11 remains in place during passing of the left@hand **needle** 51. As can be seen in Fig. 9a, the operator pushes the forward section 13 of the **trocar** toward the right, shifting rightward @@ and thus away from the **needle**]2atJ1 -- the urethra 22, the bladder neck 24, and even to a slight extent the bladder wall 23.

of course this shifting or deformation is initiated before passing the **needle** , and maintained during the **needle** passage. As a result the operator can gain significantly in clearance between the **needle** path and the critical region of the bladder neck.

A fair estimate or educated guess...

...Following the installation of a left-side suture as in Figs. 9 and 9a, the **needle** 51 is removed, and then the bladder should be obturated and the bladder neck inspected..
...from a source 61 through a
conduit 62 or 63 to the catheter 43 or **trocar** 11, and therethrough to the bladder. When gas is preferred, of course the gas employued...

...wall can be
easily seen. Here too, if desired, the operator can press the forward **trocar** segment 13 to the right, as during the suture@placement step @@ to further
- 21
mechanically...tissue-flattening effects of the obturation for even better observation. In addition if desired the **trocar** can be rotated as suggested in Fig. 10 to move the curved segment 13 and...

...say, the

bladder is deflated. Then, as shown in Figs. 11 and 11a, a second **needle** 53 is used to install a suture to the right side of the bladder, neck and urethra.

In this case the **trocar** **curved** segment 13 is pushed laterally to the left, drawing the tissues in that direction and...

...bladder
neck 24, and to some slight extent the bladder wall 23, away from the **needle** path. Once again, I estimate that clearance added by this simple effort is probably in...

...approach point 551 @@ but that suture is already installed and is slack, and the installing **needle** prefer@ ably is already removed. Under these conditions the left side of the bladder neck...

...directly
against the left@side suture 55, 551 without creating any hazard.

The right@side **needle** 53 is then removed, leaving the suture 57 in place, and the bladder is obturated...

...by the arrow 65 in Fig. 12;
and if desired for a clearer view the **trocar** may be rotated away from the right side visual-field portions of interest.

As before...

...of the viewing device, positioned at the opposite side of the bladder. Here too, the **trocar** **curved** segment 13 can be shifted to the left, to aid in stretching the tissues at...involved in the actual placement of sutures, particularly such details as double passing throvgh the **vaginal** wall, are outside the scope of this document and are generally performed as described in...

...by
reference @@ as are the content of my earlier patents directed to details of the **suprapubic** **incision** , movement
- 23
of an **instrument** through that **incision** into the bladder, etc.; and the content of my earlier patent directed to practical details of gas obturation.

Figs 13 shows that the **trocar** used in my procedure advantageously has, formed in its tip, a concave depression 16. This...

...directly if no intermediary is in use.

This configuration is thus a modification of the **trocar** geometries disclosed in my earlier patents relating to installation of a **suprapubic** catheter, Based

upon my intervening experience, I believe that the configuration shown in Fig. 13 offers a significant improvement in simplicity.

The **trocar** configurations of my two earlier patents both incorporate a removable blunt convex tip which is...

...outset to engage the scalpel tip, and immediately thereafter during the process of passing the **trocar** outward through the incision. once it is protruding from the incision, the tip is unscrewed...

...removes the alternative hazard, however theorettcal and remote it may be, of initially inserting the **trocar** with the tip slightly loose @@ and then having it fall off within the patient's improvements, the Fig. 13 configura@
- 24
tion functions almost identically with the **trocar** of my 1281 patent, in engaging the tip of the catheter or other **device** for passage through the **incision** and into the bladder. With the present configuration, in other words, the tip of the...

...etc. is simply pressed and held into the cup 16, As to comparison with the **trocar** of my 1486 patent, the function of the present configuration appears to be a clear improvement for a **vaginal** -suspension procedure, for the following reasons.

In the present procedure, the **trocar** remains in the bladder for an extended period after formation of the incision and is...

...hooked-tip design, the present configuration is much improved in ease of disconnection of the **trocar** from the catheter tip once the latter has been moved into the bladder. For some...

...the configuration shown in Fig. 13 may offer some reduction in the need for specialized **equipment** , for performance of the procedure of the present invention.

Nevertheless my two earlier **trocar** configurations have both been proven serviceable, and either may be employed in the present procedure...

...for present purposes to define length indicia 15 along the shaft 12@13 of the **trocar** .

- 25
These markings may include, for example, centimeter graduations as illustrated -- together with, preferably, numerals...

...from the tip 14. These various indicia 15 may be etched or stamped into the **trocar** surface, or otherwise

suitably applied -- with due attention to avoiding contamination of the patient's system.
As described in my earlier patents the **trocar** is advantageously formed with a lumen extending from a lateral aperture 17 near the tip 14 through the entire length of the **trocar** to a suitable hose fitting or the like 18 at or near the opposite end...

Claim
lo A procedure for treating **incontinence** in a woman, comprising the steps of:
inserting a urethral **trocar** into the woman's bladder and therethrough to press outward firmly against the woman's...

...be
perceptible from the exterior of the woman's body;
then, with the exteriorly perceptible **trocar** as a **guide** , making a **suprapubic** incision in the woman's abdominal wall and bladder to gain access to a tip of the **trocar** ;
then using the tip of the **trocar** directly or indirectly to **guide** a tip of a viewing **device** through the **suprapubic** **incision** and into the woman's bladder;
and
then installing sutures between the woman's rectus fascia and **vagina** , by means of a **needle** inserted through the woman's abdomen and into the woman's **vagina** ;
substantially during the suture@installing step, monitoring the interior of the bladder through the viewing **device** to avoid placement of **sutures** in the bladder wall;
whereby the viewing device is remote from the neck of the...

...sutures is particularly likely; and
substantially during the suture@installing and monitoring steps, maneuvering the **trocar** or the viewing device, or both, to manipulate tissues of the woman's bladder, urethra...

...1, wherein the tip-using step comprises the substeps of:
employing the tip of the **trocar** directly or indirectly to **guide** an end of a catheter through the **suprapubic** incision into the woman's bladder; and
then inserting the tip of the viewing device...

...into the woman's bladder.
3* The procedure of claim 2, further comprising:
after the **suture** -installing step, withdrawing the viewing **device** and leaving the catheter in place for drainage of urine from the bladder until the...

...recovers from immediate effects of previous steps,

4 The procedure of claim 2, wherein the
trocar -tip-employing substep comprises:
mating the end of the catheter or an inter@
mediary appliance with the tip of the **trocar** ; and
then moving the end of the catheter or
appliance, while it is mated with the tip of the
trocar , inward through the incision and into the
woman's bladder,
5e The procedure of claim 2, wherein the
trocar @tip@employing substep-comprises:
passing the **trocar** tip outward through the
suprapubic incision;
then mating the tip of the catheter or of an
intermediary appliance with the tip of the **trocar** ;
and
then moving the tip of the catheter or appli
ance, together with the tip of the **trocar** , inward
through the incision and into the woman's bladder. - 28
6o The procedure of...

...the monitoring step comprises inflating the
bladder with gas through the catheter, viewing
device, or **trocar** , or combinations of these paths.
7a The procedure of claim 1, wherein the tip-using a catheter that has
near its end a
balloon;
employing the tip of the **trocar** directly or
indirectly to **guide** the end of the catheter and the
balloon through the **suprapubic** incision into the
woman's bladder;
.9 inflating the balloon to anchor the end of...

...into the
woman's bladder.
8e The procedure of claim 7, further comprising:
after the **suture** @installing step, withdrawing
the viewing **device** and leaving the catheter anchored
in place by the balloon for drainage of urine from...

...from immediate
effects of the previous steps.
96 The procedure of claim 1, wherein the
trocar @tip-using step comprises:
mating the tip of the viewing device or of an
intermediary appliance with the tip of the **trocar** ;
and
then moving the tip of the viewing device or
appliance, while it is mated with the tip of the
trocar , inward through the incision and into the
woman's bladder.
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10 The procedure of claim 1, wherein the
trocar -tip-using step comprises:
passing the **trocar** tip outward through the
suprapubic incision;

then mating the tip of an viewing device or of
an intermediary appliance with the tip of the **trocar** ;
and
then moving the tip of the viewing device or
appliance, together with the tip of the **trocar** ,
inward through the incision and into the woman's
bladder.

11 The procedure of claim 1, further comprising:
before the inserting step, making or obtaining a
urethral **trocar** that bears visible graduations along
at least part of its length;
wherein the **trocar** @maneuvering step comprises
referring to the graduations as they appear at the
woman's perineum...

...13, wherein:
the inflation and deflation substeps are
performed by passage of gas through the **trocar** or
viewing device, or both.

15 The procedure of claim 1, further comprising the
step of:
before the inserting step, making or obtaining a
urethral **trocar** with a recess at its tip and a
generally peripheral ridge around the recess;
wherein...

...1. further comprising the
step of:
before the inserting step, making or obtaining a
urethral **trocar** with a recess at its tip and a
generally peripheral ridge around the recess, and making and **trocar**
-using
steps comprise referring to the graduations as they
appear at the woman's perineum, to aid in positioning
the **trocar** ; and
wherein the incision@making step comprises
pressing a sharp object through the abdominal wall
and bladder, and toward and into the recess.
17a A procedure for treating **incontinence** in a
woman, comprising the steps of:
inserting a urethral **trocar** into the woman's
bladder and therethrough to press outward firmly
against the woman's...

...be
perceptible from the exterior of the woman's body;
then, with the exteriorly perceptible **trocar** as
a **guide** , making a **suprapubic** incision in the woman's
abdominal wall and bladder to gain access to a tip of
the **trocar** ;
providing a catheter that has near its end a
balloon;
then mating the end of the catheter or an inter
mediary appliance with the tip of the **trocar** ; and
then moving the end of the catheter or

appliance, while it is mated with the tip of the **trocar** , inward through the **suprapubic** incision and into the woman's bladder;
then positioning the balloon within the woman's...

...of
sutures is particularly likely;
then installing sutures between the woman's rectus fascia and **vagina** , by means of a **needle** inserted through the woman's abdomen and into the woman's **vagina** ;
substantially during the suture@installing step, monitoring the interior of the bladder through the viewing **device** to avoid placement of **sutures** in the bladder wall;
[Claim 17 concludes
- 32
[Claim 17 concluded:]
the installing and monitoring...

...a suture, then (2) inflating the bladder with gas through the catheter, viewing device, or **trocar** , or combinations thereof, to facilitate observation of the bladder wall, then (3) observing the bladder...

...is visible therein, and then (4) deflating the bladder through the catheter, viewing device, or **trocar** , or combinations thereof;
substantially during the suture@installing and monitoring steps, maneuvering the **trocar** or the viewing device, or both, to manipulate tissues of the woman's bladder, urethra...
...facilitate
accurate placement of the sutures, particularly avoiding the bladder and urethra; and
after the **suture** -installing step, withdrawing the viewing **device** and leaving the catheter anchored in place by the balloon for drainage of urine from...

...17, further comprising
the step of:
before the inserting step, making or obtaining a urethral **trocar** that bears visible graduations along at least part of its length;
wherein the **trocar** @maneuvering step comprises referring to the graduations as they appear at the woman's perineum...

...17, further comprising
the step of:
before the inserting step, making or obtaining a urethral **trocar** that bears visible graduations along at least part of its length, and that has a...
...through the abdominal
wall and bladder, and toward and into the recess; and
wherein the **trocar** -maneuvering step comprises

referring to the graduations as they appear at the woman's perineum.